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Living through a season-ending injury : an exploratory study

Rex R. Vogan II
Ithaca College

LIVING THROUGH A SEASON-ENDING INJURY: AN EXPLORATORY STUDY

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Rex R. Vogan II

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CERTIFICATE OF APPROVAL

MASTER OF SCIENCE THESIS

This is to certify that the Master of Science Thesis of

Rex R. Vogan II

submitted in partial fulfillment of the requirements for the degree of Master of Science in Exercise and Sport Sciences at Ithaca College has been approved.

Thesis Advisor:

Committee Member:

Candidate:

Chair, Graduate Program in
Exercise and Sport Sciences:

Dean of Graduate Studies:

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ABSTRACT

Each and every day an athlete participates in his or her respective sport the possibility for sustaining an injury is always present. It has been documented that experiencing a sport injury can be very difficult for an athlete to cope with and overcome. However, there is a lack of in-depth understanding on the possible experiences that collegiate athletes may face when confronted with any type (i.e., severity) of injury. This study investigated Division III student-athletes who experienced a season-ending injury.

Three student-athletes (n=3) were interviewed following a season-ending injury. The purpose of this study was to better understand the cognitive processes associated with season-ending sport injury. Athletes participated in three separate in-depth, semistructured interviews throughout their injury and rehabilitation (i.e., two weeks after their injury was diagnosed as season-ending, the half way point of their projected rehabilitation, and two weeks prior to the projected completion of their rehabilitation) in order to capture their "lived" injury experiences. To triangulate the data, the primary athletic trainer working with each injured athlete was also interviewed. The athletic trainers were interviewed on one occasion (i.e., the half way point of each injured athlete's projected rehabilitation) to obtain their perspective on how the injured athlete was handling his or her season-ending injury. To further triangulate the data, the primary researcher also collected observation data by observing the athletes in their rehabilitation sessions several times per week. Finally, journal recordings were completed by each injured athlete, describing their weekly experiences and emotions (i.e., one journal entry per week).

Data were transcribed and inferences were drawn by way of an 8-step qualitative data analysis, illustrating each athlete's unique responses to his or her season-ending injury. Results revealed both similar and dissimilar themes associated with the aforementioned three injury phases, including a wide range of thoughts, feelings, and experiences. The participants' uniqueness was highlighted by only 9 similar themes. In contrast, 38 dissimilar themes emerged despite all three participants having been diagnosed with the same injury. All dissimilar themes were associated with the athlete's perceived views of social support, motivation, and physical recovery. Each athlete expressed different experiences associated with these three areas, contributing to 38 dissimilar themes.

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To all of the subjects that participated in this study, thank you for your honest and descriptive personal experiences regarding your season-ending injuries and volunteering your time and energy.

DEDICATION

I would like to dedicate my thesis to my late grandmother, Marie Z. Vogan, who died one year ago. You were my only grandparent that I truly knew and loved completely. I think about you often and miss you very much.

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Chapter 1

INTRODUCTION

Sport, like life, is completely unpredictable from one moment to the next. A focused and determined athlete may do everything in his or her power to prevent an injury by attempting to train hard, eat right, and mentally prepare for each practice and competition. In fact, many athletes tend to believe they can, through skill and effort, control their own destiny. But, within a split second, the immortality many athletes feel can come crashing down with a sharp and awakening pain of reality. Injury is blind to race, age, gender, and skill level. In the United States alone, approximately 17 million athletes are injured each year (Heil, 1993). Ironically, these numbers continue to rise despite advances in athletic equipment and rule changes promoting safety and protection for participants. Even with enhanced technology and a greater understanding of the human body and how it works, injuries continue to occur.

Despite the well-intentioned efforts of the amateur and professional sport organizations (i.e., those in charge of promoting improvements in equipment and facilities, rule changes, etc.) athletic injury continues to undermine the aspirations and achievements of many participants (Pargman, 1999; Tator & Edmands, 1986). Serious injury is one of the most emotionally and psychologically traumatic experiences faced by an athlete (Heil, 1993). When sudden injury occurs, athletes may experience every emotion in the psychological lexicon: depression, anger, fear, tension, disgust, anxiety, and panic to name a few (Lynch, 1988). In general, how athletes handle this period of adjustment is most dependent upon the strength of their identification with sport, their perceptions of self worth, and the importance they place on the expectations held for

them by others (Henschen & Shelley, 1999). Danish (1986) stated that injury can be highly stressful because it not only threatens physical well-being, but acts as a threat to the athletes self-concept, belief system, social and occupational functioning, values, commitments, and emotional equilibrium. For the injured athlete, it is not uncommon to experience a loss of independence and social mobility (i.e., loss of status), a decreased capacity to perform, greater exposure to pain, and thoughts about disfigurement, permanent disability, and death (Hobfoll & Stephens, 1990; McDonald & Hardy, 1990).

The severity of sport injuries can range from cuts and bruises to permanent spinal cord injury (Reid & Saboe, 1989). Just as the nature of the physical injury differs, the emotional response to injury also differs, with some athletes experiencing marked emotional disturbances (Smith, Scott, O'fallon, & Young, 1990). As with all experiences in sport, the way in which the athlete reacts to an injury will be based on his or her perceptions of the injury. This could range from extreme distress to a profound feeling of relief and peacefulness. One athlete may see the injury as a disaster, another may see it as an opportunity to show courage, and yet another may find it a welcomed relief from the embarrassment of poor performance, lack of playing time, or a losing season (Rotella, 1982). As described by Tunks and Bellissimo (1988) (as cited in Wiese-Bjornstal & Smith, 1999), some individuals seem able to transform calamities into opportunities for growth where others transform everyday hassles into overwhelming adversities.

As stated, the most significant factor determining the magnitude of the emotional response related to injury appears to be the athlete's perception about the severity of the injury and its consequences (Smith et al., 1990). Typically, the most seriously injured athletes will demonstrate the most significant emotional trauma or disturbance

(McDonald & Hardy, 1990; Wiese-Bjornstal & Smith, 1999). This is not to say that athletes with short-term injuries do not experience mental anguish, but with the reality of a severe injury comes many challenges that some athletes may not be equipped to handle. Although some athletes go through the injury process with few problems, many athletes do not posses the proper coping skills necessary for a complete recovery. Not only do athletes respond differently to the same injury, but different types and severity of injuries may predispose an athlete to certain emotional reactions. Short-term, season-ending, and career-ending injuries are all injury possibilities for any participating athlete.

Season-ending injuries, like career-ending injuries, are usually quite severe and often require surgery followed by several months of rehabilitation. When a severe injury occurs, it is common that the injured athlete cope with an excess of medically based information, the loss of physical capability, the emotions of withdrawing from a desired activity, and a dependency on others to fulfill daily needs (Flint, 1999). When an athlete no longer participates as a result of a season-ending injury, there is a separation and alienation from the people and activity with whom the athlete is essentially unified (Thomas & Rintala, 1989). In some cases, unfortunately, coaches pay little attention to injured athletes because they are no longer useful to the team or perhaps because coaches feel awkward around injured athletes and do not know what to say or do (Weinberg & Gould, 1999; Wiese-Bjornstal & Smith, 1999). For those athletes who sustain a season-ending injury, isolation may be felt more frequently and with a higher intensity because coaches and teammates may "write them off" for the entire season. This perceived lack of support from teammates and coaches, while already feeling disconnected from their sport

due to physical restrictions, will likely make the physical and mental recovery that much more difficult to cope with.

Experienced physicians and sport psychologists know that a "complete" recovery from injury includes both a mental and a physical recovery. But how athletes cope with injury can vary dramatically (Samples, 1987). In order to understand more fully the process surrounding season-ending injury experiences, greater attention must be given to the individual experiences and perceptions of athletes (Shelley, 1998). Because injuries will never be completely eliminated from sport, it is important to understand how athletes typically react to injury as well as the psychological factors that might influence such reactions (Grove & Gordon, 1992). This understanding seems especially important in relation to the varying degrees (i.e., types) of injury as experienced with short-term, season-ending, and career-ending injuries.

Problem

This study described the season-ending injury experience as perceived by 3 injured athletes, as they endured their initial injury and processed through their rehabilitation and recovery. Of the few qualitative attempts to assess the psychological processes associated with athletic injuries, most have been retrospective in design and focused on populations other than the collegiate student-athlete (Bianco, Malo, & Orlick, 1999; Gordon & Lindgren, 1990; Gould, Udry, Bridges, & Beck, 1997a, 1997b; Udry, Gould, Bridges, & Beck, 1997). As a result, there is still a lack of research that depicts the in-depth descriptions of the season-ending injury experience as described by the collegiate injured athlete as the athlete works through his or her injury, rehabilitation, and return to play (Shelley, 1999). In short, we simply do not have a comprehensive

understanding of what the collegiate student-athlete may feel and think when faced with a season-ending injury.

Significance

In recent years some researchers have begun to consider alternative paradigms in their study of behavior in sport psychology research, resulting in a steady increase in the number of qualitative investigations (Dale, 1996). Research studies designed to better understand injured athletes' perceptions, feelings, emotions, and cognitions, have generally focused on elite-amateur, professional, and cross-cultural athletes (Rose & Jevne, 1993). As a result, qualitative means of inquiry have generally been excluded in documenting the injury experiences of collegiate athletes (Shelley, 1998). The focus of this study was on gathering in-depth qualitative data related to collegiate athletes' specific interpretations and descriptions of their season-ending injury experiences. A phenomenological qualitative design was used to assess each injured athlete's perceptions.

By understanding individual athlete perceptions and their unique feelings surrounding injury, a greater awareness of the injury and rehabilitation processes will likely unfold. This awareness can provide new insight in creating more efficient and effective interventions, allowing sport psychology consultants, counselors, athletic trainers, and doctors to become better prepared for dealing with and treating injured athletes.

It is important to know not only what an athlete feels but also why the athlete feels what he or she does. By establishing the "what" and probing deeper to discover the "why", the true experience for that athlete may be uncovered. As a result, sports medicine

personnel can have a deeper understanding of the potential issues involved with injury. Ultimately, increasing the knowledge about the psychological issues related to athletic injury may serve to help other injured athletes better cope and recover from their injury.

Research Question

What do Division III collegiate student-athletes experience following a season-ending injury?

Purpose

The purpose of this study was to better understand the psychological processes associated with season-ending sport injury as experienced by Division III student-athletes. A qualitative phenomenological research design was used to assess the experiences and perceptions of the injured student-athletes, following their initial injury and throughout their rehabilitation.

Delimitations

1. This study was delimited to any male or female athlete participating in one or more of the sports offered at Ithaca College.
2. Only season-ending injury experiences were evaluated.
3. A season-ending injury was defined as an injury severe enough to keep the athlete away from competition and practices for the remainder of the season, regardless of what point in the season the injury took place (e.g., a broken leg at the beginning, middle, or end of the season).
4. There were 3 subjects.

Limitations

1. Results were limited to the truthfulness of the responses from the injured athletes participating in this study.
2. Results were limited to the qualitative methods used in this study.

Definition of Terms

1. Bracketing is a method by which the researcher attempts to "put aside" what he or she already knows about the experience under investigation (Patton, 1990).
2. An interview guide is a list of questions, topics, or issues that are to be explored in the course of an interview (Patton, 1990).
3. Member checking allows the study participants to review the finalized interview transcriptions to make comments concerning the accuracy of the content and to verify data transcription and results (Janesick, 1994).
4. Phenomenology is concerned with attempting to understand human behavior through the eyes of an individual. This type of qualitative inquiry studies how people describe an experience by way of their own unique senses (Patton, 1990).
5. Rigor refers to one's discipline, adherence, and accuracy in the collection, production, analysis, and presentation of qualitative data (Lincoln & Guba, 1985).
6. Triangulation is the use of multiple methods of data collection to secure an in-depth understanding of the phenomenon in question (Denzin & Lincoln,

1994). The combination of multiple methods, empirical materials, and observations in a single study is a strategy that adds rigor and depth to any investigation (Denzin & Lincoln, 1994).

Chapter 2

REVIEW OF LITERATURE

The possibility of an athlete sustaining an injury is very real. Depending on the sport, an athlete can expect to endure at least one significant interruption, and often several interruptions, to training and competition due to injury (Ievleva & Orlick, 1999). Almost one in two collegiate football players suffers an injury severe enough to lose playing time (Zemper, 1989). Kerr and Minden (1988) reported that within a two year period, 83% of the elite gymnasts they studied had been injured at least once. For athletes who are accustomed to seeking control over opponents and athletic situations, their feeling of helplessness as a result of injury, can be overwhelming. The committed athlete usually lacks the opportunity to develop a well rounded identity outside of sport. With a self-identity constructed solely from athletic participation, injury may be especially difficult because the athlete has little to maintain their self-worth. Any physical impairment which prohibits active involvement in an athlete's sport, whether temporary or permanent, is cognitively, emotionally, and behaviorally challenging (Pederson, 1986). In fact, the psychological pain caused by injury and the temporary or permanent loss of sport, can be as difficult to cope with as the physical pain (Goldberg, 1995). As a result, many athletes often adopt a fatalistic perspective that recovery will be incomplete and performance will be permanently hindered (Fisher, Scriber, Matheny, Alderman, & Bitting, 1993).

Because the treatment of sport injuries primarily involves physical interventions, the psychological impact of the injury is often overlooked (Danish, 1986). By ignoring the psychological state of the athlete, the physiological injuries of that athlete may be

compounded (Lamb, 1986). In short, it is not sufficient for the athlete to recover only physically, he or she must also recover mentally (Hodge, 1990). Modern improvements in surgical techniques and physical rehabilitation programs have reduced the time required for injury recovery. As a result, the time available for psychological recovery and adjustment has also been reduced. Although many athletes demonstrate effective and "healthy" psychological responses to injury, some do not (Hodge, 1990). Specific psychological needs of injured athletes must be satisfied and strategies developed to promote a complete healing process (Flint, 1999).

The Mind-Body Connection Leading to Injury

The mind-body relationship is apparent in all aspects of sport, including the injury process. It has been well documented that negative thoughts surrounding a competition lead to physiological changes (Lynch, 1988; Pargman, 1999; Zinsser, Bunker, & Williams, 1998). According to Lynch (1988), as a result of negative thinking, the athlete may experience negative emotions such as doubts, worries and fears. In turn, the athlete's attention narrows and becomes focused on these negative emotions which causes an increase in anxiety. This increase in anxiety will increase physiological reactions such as heart rate, sweating and muscle tension, and negatively affect the athlete's ability to deal with relevant and important information. These physiological changes may be portrayed on the athletic field through a breakdown of timing and coordination, fatigue, and rushing. Ultimately this may create a "choking" response, during which time the athlete experiences a sub-par performance. It is at this time that the athlete may become more vulnerable to injury.

Stress impairs an athlete's ability to concentrate and to organize thoughts logically (Anderson & Williams, 1988). Instead of concentrating on the task at hand, his or her thinking tends to be dominated by worries about the consequences of their actions and by self-defeating thoughts. It must be stressed that an athlete does not lose his or her performance skills from one competition to the next, they lose the mental focus that allows them to perform those skills. It is this lack of focus that likely increases the possibility of injury.

Psychological Experiences following Injury

According to many authors (Lynch, 1988; Pederson, 1986; Rotella, 1982; Samples, 1997; Williams, Rotella, & Heyman, 1998), athletes commonly experience a sequence of predictable, psychological reactions similar to the five-stage grief process outlined by Kubler-Ross (1969). Following is a list of these reactions.

1. Disbelief, denial, and isolation; an athlete's first reaction to injury is often shock, disbelief, and/or denial. Athletes often describe a feeling of numbness consuming their entire body and mind. For example, Young, McTeer, and White (1994) interviewed 16 current and former male elite athletes in southern Alberta and Ontario Canada. Semistructured interviews were conducted, recorded, and transcribed. All athletes had experienced very painful injuries, and most had incurred multiple injuries. Results indicated that most of the athletes interviewed denied their injury for as long as possible. This was characterized by the following statement made by one of these athletes:

> I finished the practice and went home. It was at the game the next day, I just tried eating something and it hurt a lot to eat because of the digestive system, all the gases and stuff inside the stomach didn't mix good. And so I just went to sleep and tried to forget about it and just hoped by morning it would be better. I couldn't really sleep because I couldn't lie on one side or any side and the pain was always

> really constant and numbing and dull. So the next day I tried to ignore it and tried to play but I just couldn't do it. (Young et al., 1994; p.183)

Often, injured athletes will seek second, third, or as many medical opinions as they can afford, in order to displace the inevitable diagnosis (Henschen & Shelley, 1999). If the athlete subscribes to the myth of athletic invulnerability or invincibility, then the denial phase can be long and traumatic (Ogilvie & Howe, 1986).

2. Anger; emotions such as rage, envy, resentment, hostility, and aggression may also be frequently displayed (Pederson, 1986). The athlete may direct this anger towards family and friends. But often, the athlete will direct the anger against himself or herself. This frequently includes the "why me" question that so often has no answer (Kanel, 1999). Given athletes' generally excellent health and their posture of physical invulnerability, injury is often perceived by players as a form of bodily betrayal and often results in self-resentment and anger (Young et al., 1994). One athlete, regarding his injury stated, "It's like it's not a part of you. Like it's a totally different portion or something" (Young et. al., 1994; p.186). In addition to anger, Young et al. (1994) reported that injured athletes were often reluctant to acknowledge that the injured body part was their own due to the embarrassment surrounding the vulnerability of their bodies. Unpredicted mood changes and resentment towards others may also be prominent during this phase (Evans & Hardy, 1985).

3. Bargaining; during this period the injured athlete may long for what he or she "used to be" and may spend a great deal of time in past memories and fantasies about the future. The athlete might feel a great loss, not just a physical loss but a very personal loss. This can be characterized by an athlete's determination to bargain with his or her coaches, athletic trainers, physical therapists, self, and even God in an effort to get back on the

field as soon as possible. Rose and Jevne (1993) studied the psychological responses of seven injured athletes who were out of competition for a minimum of 7 days. Participants were interviewed and encouraged to openly discuss their injury experiences. One athlete illustrated a clear example of bargaining that involved significantly reducing his training during the week due to the discomfort of his injury, but then attempting to complete triathlons on the weekend. This athlete realized that he was injured and needed to take time off but he bargained with himself by cutting back on his practice so he could still compete.

4. Depression; the injured athlete may also withdraw from teammates, friends, and family members. The injured athlete can be in an unfamiliar state in which they lack control and feel consumed with powerlessness. Depression often includes sadness, pessimism, gloominess, and feelings of guilt and worthlessness, along with lethargy (Kanel, 1999). Weiss and Troxel (1986) interviewed ten injured athletes who played at the collegiate or elite level of their respective sport. Among other findings, these authors found athletes to have an inability to cope with their injuries because they felt externally controlled by their injury. In other words, they felt that their injury was a powerful force in and of itself, and that nothing they did helped them get better. Thomas and Rintala (1989) even found the injured athlete to be a reminder to healthy teammates that the body is vulnerable, that an injury can happen to anybody. As a result, teammates may voluntarily stay away from the injured athlete, in order to suppress the reality that sustaining an injury is possible. This isolation may contribute to, intensify, or lengthen the depression stage for many injured athletes.

5. Acceptance; this generally occurs when the athlete comes to terms with what has happened and is physically, emotionally, and spiritually prepared to move forward toward recovery. The length of time it will take for an athlete to progress through each stage depends on the emotional stability of the individual, the importance of the injury, and the reactions of significant others (Nideffer, 1989). According to Lynch (1988) the athlete will alternate between these stages until acceptance is achieved.

Pederson (1986) felt that athletes may exhibit signs of a shortened three-stage grief response similar to the aforementioned stages depicted by Kubler-Ross (1969). Although the clinical literature generally emphasizes loss through the bereavement of a significant other, grief may be occasioned by the loss of any significant object, the significance of which is determined by the individual's own value system (Evans & Hardy, 1995). The object for the injured athlete may be the loss of physical expression, personal identity, or emotional bonds with other players on the team. According to Pederson (1986) phase I of the grief response is characterized by a sudden shock-like state, in immediate response to the injury. Common emotions during this time are anger, denial of the injury, and bargaining behaviors. Phase II involves intense preoccupation with the injury, correlated to insomnia, fatigue, crying, nightmares, depression, and guilt surrounding their leaving the team. The following excerpt from an injured athlete who sustained a severe groin pull 2 weeks prior to participating in the 1984 Olympic marathon trials summarizes Phase II. This athlete stated:

> ... Life is absurd. Just when I begin to put it all together, I pull this muscle. I'm so depressed...why me? Why now? I'll never be able to get to this place again. I'm so afraid I'll never fully recover. Is there any doctor who can help me to get going? The stress is unbearable, to say nothing of the physical pain itself. It's just not fair. I feel like dying. A terrible loss. (Lynch, 1988; p.161)

Phase III is characterized as reorganization. This is the point where the injured athlete has secured enough strength and courage to reintegrate into previous activities. For example, an injured athlete may have the desire to be among his or her teammates again and begin assisting the coaching staff by helping with the planning and running of practices and workouts.

Based on models outlined by Martens (1977) and Passer (1982), Weiss and Troxel (1986) proposed that injured athletes similarly pass through four stages after injury. A simplified modification of this four-stage model, with regard to the athletic injury situation and the stress that it creates, is presented by Wiese and Weiss (1987). The first stage addresses the question, "what has happened?" The injury itself is the source of stress that directly impacts the remainder of the response stages. The second stage is characterized by "what the athlete thinks" about the injury. This involves the athlete's cognitive appraisal of the injury and his or her ability to deal with it. Whether this appraisal is positive or negative influences the next stage in the stress process. The third stage deals with "how the athlete feels" about the injury. Emotional responses to the injury will depend on the athlete's cognitive evaluation. This reaction may manifest itself as physiological arousal, anxiety, or worry. The fourth and final stage is identified by "what the athlete will do" about the injury. This includes the behavioral consequence of the physical and psychological responses to injury (e.g., commit to a rehabilitation program and return to play, or not).

Similarly, Brewer (1994) identified a five stage cognitive appraisal model (see Figure 1) relevant to the athletic injury. This, like most cognitive appraisal models, has evolved from the injury prediction model (see Figure 2) proposed by Anderson and

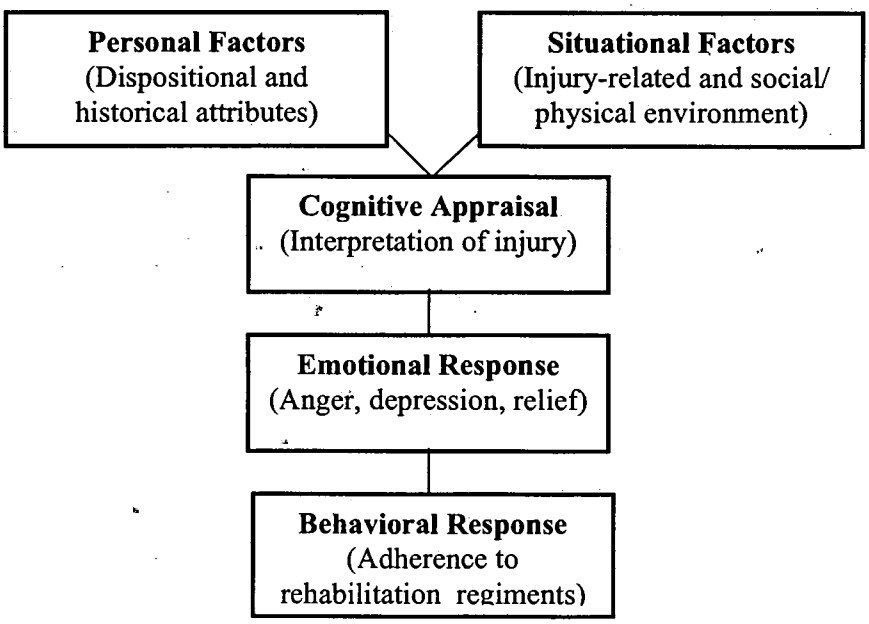

Figure 1. Brewer's cognitive appraisal model (1994).

Williams (1988). The basis of these cognitive appraisal models is that one's interpretation of an injury will determine his or her psychological responses following injury.

According to Brewer (1994), the advantage of a cognitive appraisal model is that it accounts for individual differences in responses to athletic injury. This is due mainly to the proposed interaction between personal and situational factors, and the subsequent appraisal of these factors (Evans & Hardy, 1999).

In summary, stressful situations can produce emotional reactions ranging from exhilaration, when the event is appraised as a demanding but manageable challenge, to the more common emotions of anxiety, anger, and discouragement. Cognitive appraisal and coping skills are personal variables that influence the severity of stress. People respond differently to the same type of stress depending on its meaning for them and the amount of confidence they have in their ability to cope. Responding to athletic injury is no different, as is depicted in the two aforementioned models.

Wiese-Bjornstal, Smith, Shaffer, and Morrey (1998) created an integrated model of psychological response to the sport injury and rehabilitation processes. They combined elements from the stress and cognitive appraisal models to make one integrated model (see Figure 3). According to Wiese-Bjornstal et al. (1998), the bi-directional arrows at the bottom of the model illustrate the dynamic nature of the recovery process. Accordingly, an athlete's cognitive appraisal affects emotions, which in turn affects behavior. But this model also shows that an athlete's cognitive appraisal can influence in the reverse direction by affecting behavior, which then affects emotions. Regardless of the outcome (i.e., a positive or negative recovery) the athlete's cognitive appraisal and his or her emotional and behavioral responses will feed off each other.

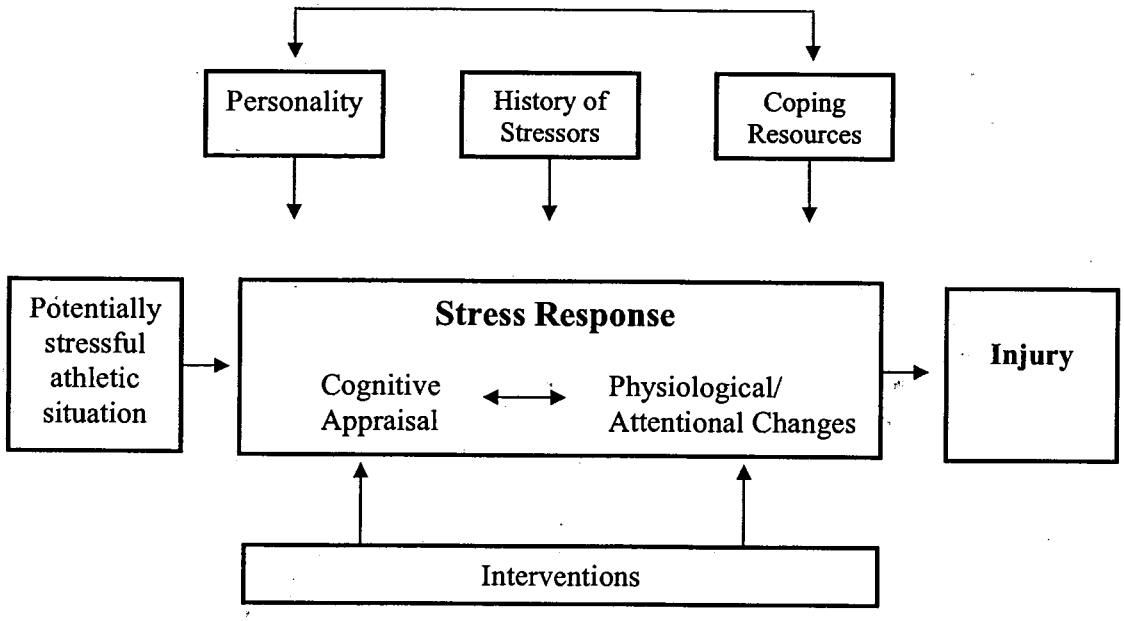

Figure 2. Anderson and Williams (1988) stress and injury model.

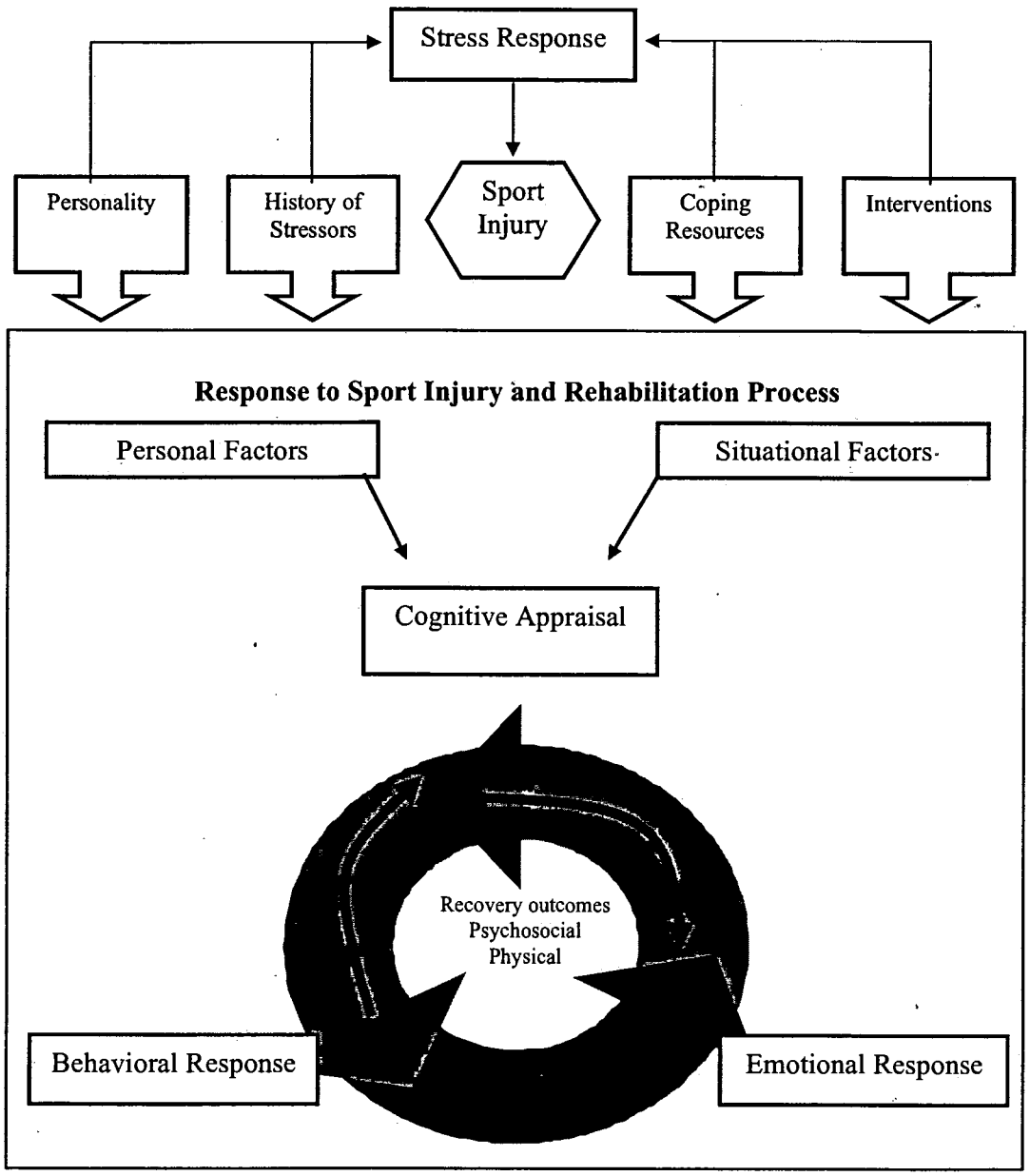

Figure 3. Wiese-Bjornstal et al. (1998) integrated model of psychological response to the sport injury rehabilitation process.

Short-Term Injuries

Although psychological factors may be assumed to play a more significant role in severe injuries, this may not always be the case. The significance of any loss is determined by an athlete's own value system and by an interplay of personal and situational factors (Evans & Hardy, 1999). Injuries that are not serious or complicated from a physical standpoint may be psychologically debilitating especially if the injury has a special or symbolic meaning to the athlete (Deutsch, 1985). Quackenbush and Crossman (1994) studied 25 competitive and recreational athletes who experienced and recovered from an athletic injury in the year prior. The severity of injuries were broken down into three categories:

1. Minor; less then 7 days away from training.

2. Moderate; between 7 and 21 days away from training.

3. Severe; more then three weeks away from training. A three part questionnaire was used to collect information from the participants. Results indicated that the type, intensity, and duration of injury did in fact impact the emotional responses by the athletes. Negative emotional responses, such as frustration, anger, and disappointment decreased from the onset of the injury to returning to play. Where the positive emotional responses of being hopeful and optimistic increased over this same time frame. The study also revealed that athletes with less severe injuries were able to pass through the negative emotions more quickly then those athletes who sustained a more severe injury. It may be that the longer an athlete perceives that he or she will be away from his or her sport, the harder it is for him or her to accept what has taken place.

Any disruption from an athlete's normal routine has the potential to cause frustration and anxiety. Many athletes are habitual in their routines and when change occurs it may be met with a negative reaction. For the injured athlete, grieving may result from any perceived loss of "self", especially when injured athletes realize that what they were capable of doing yesterday they cannot achieve today. Although this loss is normally not permanent, the loss of participation and all it encompasses may be traumatic (Lynch, 1988). Another variable impacting the injured athlete's reaction may be the time of season in which the injury takes place. An athlete may be predisposed to a more negative reaction if the injury occurs while fighting for a position on the team, as opposed to mid-season when his or her role has already been established. Despite the circumstances, many athletes will likely have to rely on some form of social support in order to overcome and cope with their injury and situation.

Season-Ending Injuries

Season-ending injuries may be experienced on a continuum ranging from a severe life altering experience to a welcomed relief from the daily grind of a long season. The immediate loss of the sport may cause a severe imbalance to all aspects of the athlete's life. The loss of status with his or her team and coaches, feelings of rejection, and interpersonal conflicts may be prevalent. Gould, Udry, Bridges, and Beck (1997a) interviewed 21 United States freestyle and alpine skiers who had sustained a season-ending injury between 1990-1994. A season-ending injury was defined as one that prevented a skier from completing a ski-racing season and kept them off skis for a minimum of three months. For these athletes, a major source of stress stemmed from their

perceived lack of attention and feelings of intense isolation. These feelings were captured by the following athlete:

> ...Lack of coach support bummed me out, the coach I'd been close to turned away from me, I didn't have anyone to talk to and it was kind of lonely, and you don't hear from anyone anymore (teammates and coaches) and you feel like you are forgotten. (Gould et al., 1997a; p. 369)

Similarly, a second athlete stated:

> ...I felt shut up, cut off from the ski team. That was one of the problems I had. I didn't feel like I was being cared for, basically. Once I got home, it was like they (the ski team) dropped me off at home, threw all my luggage in the house, and were like, "see you when you get done." I had a real, real hard time with that. Because I didn't want to feel cut off from the whole thing...When you are doing your rehab and they shut you off...from the whole ski team and how people are doing, and just keeping in touch with you, then you are like "Do I really want to go back to that? Do they even want me back? Why am I even doing this?" (Gould et al., 1997a; pp. 369-370)

Gordon and Lindgren (1990) conducted a case study with an elite fast bowler (cricket) detailing his severe back injury and rehabilitation from 1983-1988. Retrospective accounts of the psychological effects of responding to and rehabilitating from his injury were conducted through qualitative interviews. Similar to the Gould et al. (1997a) findings, feelings of rejection and isolation were also reported as this athlete stated, "I will always remember how cut off and isolated I felt from both teammates and friends who seemed to lose interest in me" (Gordon & Lindgren, 1990; p. 73).

Thomas and Rintala (1989) stated coaches to be equally effective in separating the injured athlete from other teammates to avoid having the reality of injury be a distraction for the healthy competitors. Unfortunately, many coaches expect athletes to "tough it out" and not need support from the coach or others (Wiese-Bjornstal & Smith, 1999). While already physically and psychologically incarcerated, fear of the unknown may be an

additional source of stress the injured athlete will have to face. This was portrayed by the elite fast bowler when he stated:

> Immediately after the operation there was always the feeling of uncertainty, did the surgery work? Will I heal properly? This lasted at least three months during which time I had numerous x-rays and I had to wear an awful brace which seemed to intrigue everyone-especially the media-except me. The dominant emotion at this time was always "helplessness." (Gordon & Lindgren, 1990; p.73)

Losing control of one's physical movement and having to depend on others may be quite challenging for most athletes, especially when most sporting environments encourage self-reliance. Athletes experience feelings of separation, loneliness, guilt and a loss of identity and independence, because they feel they are no longer vitally contributing to the team and are now reliant upon others in the rehabilitative process (Quackenbush & Crossman, 1994). The athlete's ability to "surrender" and allow others to help may be a long and painful process.

Udry et al. (1997) found 90.5% of the elite alpine and freestyle ski athletes they interviewed to report feeling some emotional upheaval/reactive behavior as a result of their injury. Six higher order themes were identified in relation to emotional behaviors: 1) emotional agitation, 2) vacillation of emotion, 3) emotional depletion, 4) isolation/disconnection, 5) shock/disbelief, and 6) self-pity. Specific feelings included anger, panic, and worry, as well as outward behaviors such as acting out and crying. One athlete said:

> I was really sad, you know, I just went to the side of the course and I started crying...I knew it was over (my chance of going to the Olympics), so there was no point in trying to hold back my feelings. (Udry et. al., 1997; p. 239)

A second athlete stated, "I had just been out for half a season last year, so it was like, why the hell is this happening to me? You know I thought that I had put in my dues" (Udry et. al., 1997; p. 239).

The words from these athletes provide a humanistic representation of the emotions some athletes experience. These reactions are not universal to all athletes confronted by a season-ending injury, but illustrate the significant connection many athletes have to their specific sport.

Career-Ending Injuries

A career-ending injury can bring a whole new set of emotions and responses. The severity of the injury, permanent damage to bones, cartilage, ligaments, and nerves, as well as varying degrees of brain damage and arthritis, all significantly impact the athlete's ability to lead a productive and fulfilling life (Ogilvie & Howe, 1986). It is a time when vital issues, such as permanent retirement, identity crisis, and the transition from athlete to ex-athlete status, emerge (Henschen & Shelley, 1999). Those athletes who sacrifice in terms of emotion, time and energy, to the point that their sport has taken precedence in their lives, are the ones who will suffer the most from career-ending injuries (Ogilvie & Howe,1986). Bianco, Malo, and Orlick (1999) interviewed 12 current and 4 former members of the Canadian Alpine ski team, who sustained a serious injury (including some who experienced a career-ending injury) in their careers. For this study, a serious injury was defined as any physical condition that interrupted sport participation for 1 month or more. Results indicated a crucial issue underlying the athletes' responses to injury to be the impact that each injury had on the skier's career. One athlete, who sustained a career-ending injury, spoke of a profound sense of loss and depression

associated with the realization that career goals would remain unfulfilled. This was portrayed in the following statement, "there was pain because I had surgery, pain because I knew my career was over. It was probably the moment that I suffered the most in my life, mentally and physically. There was pain all over" (Bianco et al., 1999; p. 163).

These authors also noted that a greater psychological disturbance was recognized in those cases where a return to sport was uncertain or altogether impossible. Some athletes may be confronted with the psychological ramifications of the injury itself, career termination, and permanent disabilities all at once. In such cases, the athlete is more likely to experience difficulties in adjusting than would be the case in injury of comparable severity where return to play is anticipated (Heil, 1993). Career termination for a healthy athlete can be extremely difficult, but when you throw in all the elements of a career ending injury as the cause of termination, the injured athlete may be pushed physically and psychologically to limits of incomprehensible statute.

Young et al. (1994) interviewed one athlete who endured a career-ending injury when he suffered a heart attack during a triathlon event. He wrote, "the process was a troubling one to my inner-self, I've always prided myself on being healthy and strong and it was really confusing feeling weak" (Young et al., 1994; p. 187). Subsequently, this athlete also sustained a stroke, which not only left him partially paralyzed and without speech, but his medical difficulties were followed by family breakdowns. He described his personal downward spiral:

> Funny, I was feeling less of a man. I was married. The doctors inserted a tube into my penis to control the urination and I couldn't control my bladder and I was pissing [on] myself all the time. I felt just inadequate for maintaining my lifestyle with my wife and I suggested to her that we get separated and we did. For me, it was a non-verbal period. I couldn't explain my feelings. It was really frustrating. I felt like a baby. And in the hospital and the physio gym, I couldn't crawl because I

> would get sore with my broken rib and my separated shoulder and I couldn't verbalize and I couldn't walk. I just felt like a baby. (Young et al., 1994; p. 187)

Each individual faces a period of adjustment during the transition from athlete to ex-athlete. Some people handle this transition more successfully then others, but for most, it is a time of existential dilemmas and identity crisis (Ogilvie & Howe, 1986). Career-ending injuries may produce a scenario in which the athlete needs intervention from outside sources. Williams, Rotella, and Heyman (1998) summarized the crisis intervention model as a short-term model most often used when individuals' coping abilities are overwhelmed. The crisis intervention model consists of getting people through a crisis until their normal coping abilities return or long-term help can be provided. Crisis intervention may need to be implemented as the athlete realizes the permanent impact of his or her injury on their life. Crisis intervention often starts with helping coaches and sport psychologists to become more aware of the meaning of injuries to athletes, to be appropriately reassuring, to help athletes attend to immediate and practical concerns rather than to more distant worries, and to view injury in manageable units as opposed to an overwhelming, engulfing catastrophe (Williams et al., 1998).

In summary, the three types of injuries discussed possess unique characteristics and circumstances separate from each other, but also have some similarities. Short-term injuries are not severe and the athlete is able to return to their sport in the same season. Although any time away from the sport may be traumatic, there is no long-term threat to participation in which an athlete has to deal with. Season-ending injuries are more serious as the athlete's season ends the moment of his or her injury. With a more severe injury comes a longer healing process and usually more (i.e., longer) rehabilitation. Seasonal goals for the athlete are gone and he or she must face life without their sport for an

extended period of time. Career-ending injuries may have the greatest potential for destruction in an athlete's life. At the moment of their injury their life changes forever. As stated earlier, the athlete may be confronted with the psychological ramifications of the injury itself, career termination, and permanent disabilities all at once. The athlete has no hope for returning next season and what the athlete once did they will never do again.

Although there are many differences between the types of injuries discussed, there are also similarities that run through all three. Regardless of the severity of the injury, the athlete's reaction to the injury is likely very dependent upon their perceptions of the injury, the strength of their identification with their sport, and their personal coping skills. These three variables directly impact how an athlete will cope with his or her injury.

The Mind-Body Connection During Rehabilitation

Not only is it important to understand the mind-body partnership leading to injury, it is equally important to understand this relationship throughout rehabilitation. Being injured and undergoing treatment and rehabilitation can be highly stressful, especially to someone whose body and physical activity are the main source of self-esteem (Danish, 1986). Certain attitudes and psychological factors (e.g., a negative attitude toward rehabilitation vs. a positive attitude toward rehabilitation) may either hinder or enhance the effectiveness of a particular treatment, as well as an injured athlete's ability to cope (Ievleva & Orlick, 1999).

According to Lynch (1988), once injured, the athlete is subjected to even more stress, which will significantly interfere with the healing process. The athlete experiences a secondary-stress syndrome that creates additional panic and fear. These negative emotions will once again trigger certain physiological reactions, and negatively affect the

athlete's ability to deal with relevant information regarding their injury and rehabilitation. As a result a cycle is created in which the athlete may perpetuate his or her own injury condition. If the athlete is allowed to dwell on their injury, in terms of what they cannot do as opposed to what they can do, coping and adjusting will be difficult.

For treatment to be effective, the body and the mind must work together to facilitate complete recovery (Lynch, 1988). Belief in one's capacity to influence personal healing and attain full recovery greatly influences the healing process (Ievleva & Orlick, 1999). According to Faris (1985);

> ...to treat a knee and ignore the brain and emotions that direct the choreography of that knee is not consistent with total care of the patient. A positive state of mind promotes better attendance and attentiveness to, and more intensity toward the external rehabilitation process, which yields successful results.

When the injury is treated as if it is not related to the person having the injury, the rehabilitation process can be negatively affected. It is the person, not his or her knee or shoulder, which must be treated (Danish, 1986; Weiss & Troxel, 1986). Similarly, Lynch (1988) stated:

> What every athlete needs is a complete physician, one who is aware of the impact of the psychological components for treatment, and one who is willing to incorporate the services of a competent sport psychologist capable of educating the athlete about the role of the mind in the injury process and how to use it most effectively to ensure rapid, complete recovery. (Lynch, 1988; p. 162)

When patients do not feel understood, do not find health care professionals warm and friendly, and are intimidated by technical terminology, non-compliance is likely (Danish, 1986). The common attitude that "if the body is ready the mind is also" must continue to be challenged, as an athlete's anxiety, fear, and lack of confidence must be addressed and alleviated before he or she can return to competition (Grove & Gordon, 1992).

Rehabilitative Coping Skills

Several authors (Fisher, Domm, & Wuest, 1988; Fisher & Hoisington, 1993; Fisher et al., 1993; Taylor & May, 1996; Weiss & Troxel, 1986) have claimed that the failure to adhere to prescribed treatment regimens is an important problem among injured athletes and that there is a need to develop interventions to increase adherence. Bianco et al. (1999) described how maintaining a high level of motivation in rehabilitation was sometimes difficult, particularly when athlete rehabilitation progress was slow. One injured athlete stated:

> You're there and you're psyched but you just go flat so fast. You're doing little things that you can't see any benefits from. It's really discouraging. It's really hard to do a quality job and stay focused every day. (Bianco et al., 1999; p. 164)

Weiss and Troxel (1986), found that athletes often talk about their inability to cope with their injuries. More specifically, athletes expressed thoughts about their ability to cope with restrictions on activity and watching teammates compete to be overwhelming. Most athletes reported that they did things that adversely affected the healing process, such as engaging in vigorous walking or hiking, running, skipping rehabilitation commitments, or trying to take shortcuts in their program. These actions, of course, made things worse, including their ability to cope.

Coping skills of injured athletes are not universal. Each individual will manage their injury situation specific to their personal attributes. Wiese-Bjornstal and Smith (1999) organized coping skills into three domains:

1. The appraisal aspect of coping attempts to understand and find meaning in a crisis, evaluating what the demands are of a situation (primary appraisal) and the coping resources available (secondary appraisal).

2. Problem-focused coping confronts the reality of the crisis and deals with the tangible consequences by constructing a more satisfying situation.

3. Emotion-focused coping aims to manage the feelings provoked by the situation (stressor) and to obtain effective equilibrium. It is often the job of the sport psychologist or counselor to understand the degree of coping skills the athlete has and apply the appropriate coping strategies, given the athlete's needs and abilities.

Coping Strategies

A number of psychological techniques can be applied to help motivate athletes to adhere to their rehabilitation programs. For example, injured athletes can benefit from goal setting or learning a cognitive restructuring program as many athletes tend to dwell on negative and irrational thoughts and beliefs about themselves and their chances of recovery, particularly during long and painful periods of treatment (Williams et al., 1998). The application of psychological techniques must be tailored to fit each athlete's personality and environment and assumes that the athlete is able to employ the technique (Hedgpeth & Sowa, 1998). Four common strategies that are often employed are goal setting, imagery and visualization, social support, and positive self talk (Heil, 1993; Ievleva & Orlick, 1991; Ievleva & Orlick, 1999; Wiese-Bjornstal & Smith, 1999; Wiese & Weiss, 1987; Williams et al., 1998).

Goal Setting. Because the rehabilitation process is often very lengthy and time consuming, athletes may be prone to give up or get easily discouraged (Danish, 1986). According to Evans and Hardy (1999), responses to loss by athletes often result from the disruption of goal-directed behavior. The use of goal setting during injury rehabilitation may help to restore goal-directed behavior and enhance motivation and adherence to

rehabilitation programs. The process of goal setting may empower an injured athlete and influence his or her capacity to cope with the demands of the injury and rehabilitation (Gilbourne & Taylor, 1998). The striving for and attainment of short and long-term goals provide a sense of accomplishment that is motivating, as individual progress can be measured and observed (Wiese & Weiss, 1987). Short term goal attainment imbedded in a long range plan allows the injured athlete to see much needed improvement, thereby creating optimism that enhances rehabilitation adherence (Danish, 1986; Fisher et al., 1993). If task-oriented goal setting can be learned in the early stages of rehabilitation, then such a skill could be used throughout all phases of rehabilitation (Gilbourne & Taylor, 1998). With proper goal achievement strategies, setting goals in rehabilitation may be intrinsically motivating for the injured athlete, as it provides a sense of control over recovery.

Imagery and Visualization. An athlete in rehabilitation must accomplish the task of getting rid of negative and counterproductive thoughts, in order to accomplish positive results (Green, 1992; Samples, 1987). Ievleva and Orlick (1991) used a survey format to study 32 injured athletes, who sustained a medial collateral ligament sprain (knee) or an anterior talo fibular sprain (ankle). The purpose of the study was to explore and identify psychological characteristics, conditions, or practices that relate to the healing process. It was found that healing imagery had the greatest relationship to recovery time. The uses of imagery are varied throughout rehabilitation programs as the purposes of imagery can be to: a) facilitate the healing process, b) promote the development of a positive and relaxed outlook toward recovery, c) create the mind-set required for optimal performance, or d) bring closure to the injury experience (Green,

1992). Athletes can be taught to control their visual images and to direct them productively to reduce anxiety and aid in rehabilitation (Wiese & Weiss, 1987; Williams et al., 1998). Motivation may also be fostered if athletes realize that performance is facilitated by mental rehearsal during a time when they are unable to physically practice. To monitor imagery practice and improvement, it may be useful for athletes to keep a log or a written record of their imagery experiences (Zinsser et al., 1998). Daily practice is recommended to attain best results. What precisely is imagined is determined individually. An image that works for one person may not be as effective for someone else (Ievleva & Orlick, 1999).

Social Support. Social support offered by physical therapists/athletic trainers, family and friends, and injury support groups may give an injured athlete opportunities for enhanced recovery. The overall function of social support is to enhance the recipient's well-being (Hardy, Burke, & Crace, 1999). According to Gould, Udry, Bridges, and Beck (1997b) many athletes attributed their positive outlook on rehabilitation to their social support. This was portrayed by one athlete's statement:

> He (the athletic trainer) keeps in touch...he was a big motivator...he was really good about pushing the administration to keep supporting me...He has kept in touch with me since the beginning. He brought me to the hospital the first time...he was a big help. (Gould et al., 1997b; p. 390)

The family may be the primary social support for many athletes. Due to the non-participation status of an injured athlete, there is a separation and alienation from the people and the activity with whom the athlete is essentially unified (Thomas & Rintala, 1989). As noted earlier, teammates and coaches may voluntarily keep away from the injured athlete until he or she has recovered, making an already difficult situation even tougher. Injured athlete support groups permit athletes to share common emotional and

physical concerns with one another, and allow for the realization that they are not alone (Lynch, 1988; Wiese-Bjornstal & Smith, 1999; Wiese & Weiss, 1987). Such a group can provide honest empathy and understanding of the pain and emotions involved with the injury (Wiese & Weiss, 1987).

Positive Self-Talk. Positive self-talk techniques can help the injured athlete get rid of negative or irrational beliefs by replacing them with positive, realistic, and rational thoughts (Wiese & Weiss, 1987). Self-talk can help the athlete stay appropriately focused in the present, not dwell on the past, and minimize projecting into the future (Zinsser et al., 1998). Weiss and Troxel (1986) suggested that many athletes have a tendency to dwell on negative or irrational thoughts and beliefs about themselves, their injury, or their return to performance. Athletes cannot change the fact that they have been injured, but they can control their thoughts about their injury and recovery. Positive self-talk may allow the athlete to deal with negative thoughts or help to prevent negative thoughts from occurring. In either case, positive self-talk contributes to personal well being and healing (Ievleva & Orlick, 1991).

Qualitative Methodologies in the Study of Athletic Injury

Qualitative designs are naturalistic in that the researcher does not attempt to manipulate the research setting (Neutens & Rubinson, 1997). The qualitative research setting is a naturally occurring event, program, community, relationship, or interaction that has no predetermined course established by and for the researcher. The point of using qualitative methods is to understand naturally occurring phenomena in their naturally occurring states (Patton, 1990).

Qualitative means have generally been excluded in documenting the injury experiences of all athletes. Accounts of injured athletes' perceptions, feelings, emotions, and cognitions have been documented on a limited basis while focusing on elite-amateur, professional, and cross cultural athletes (Rose & Jevne, 1993). Of the few attempts to assess qualitatively the psychological processes associated with athletic injuries, most have been retrospective in design (Bianco, Malo, & Orlick, 1999; Gordon & Lindgren, 1990; Gould, Udry, Bridges, & Beck, 1997a, 1997b; Udry, Gould, Bridges, & Beck, 1997). As a result, there is still a lack of research that depicts the in-depth descriptions of the injury experience as described by the injured athlete as that athlete works through his or her injury, rehabilitation, and return to play (Shelley, 1999).

Shelley (1999) used a qualitative phenomenological research design to assess the experiences and perceptions of four injured Division I collegiate-athletes. The athletes were examined as they endured their injury (no participation), rehabilitation (limited-participation), and return to competition (return to play) within the same sport season in which their injury originated. Semi-structured interviews with each athlete, their primary athletic trainer, and head coach were conducted. The researcher also kept field notes that included nonparticipant observations during training room visits, attendance at practices and competitions, and daily conversations with the athletes, teammates, trainers, and friends. By using this phenomenological design, the researcher was better able to understand the injury experience from each athlete's own perspective. Results indicated 17 common themes among the participants. The common themes were categorized by way of the three aforementioned injury (six themes), rehabilitation (six themes), and

return to play phases (five themes). The themes in the no-participation phase (injury) included athletes experiencing;

1. Bitterness concerning their current injury situations and jealousy toward their healthy teammates.
2. Frustration, anger, and guilt surrounding their inability to practice, workout, and help out their team and teammates.
3. Feelings of being isolated from and misunderstood, ignored, and abandoned by coaches and teammates.
4. Concern as to what their coaches perceived about their overall injury situation.
5. A sense of hope and confidence concerning their future, overcoming their physical injuries, and once again returning to their sport.
6. A fear of injury, re-injury, and a fear of not returning to their previous playing form.

The themes in the limited-participation phase (rehabilitation) included;

1. Increased confidence in and a more positive attitude toward successfully completing their rehabilitation and returning before seasons end.
2. An ongoing fear of re-injury.
3. Feeling unsupported, misunderstood, and negatively judged by teammates and coaches.
4. Uncertainty as to what others might be thinking as athletes questioned how their coaches were perceiving them and their injury status.
5. A supporting and trusting relationship with the trainers.

6. Despite having developed a sense of accomplishment in completing their rehabilitation, there remained caution and doubt concerning whether or not they would completely overcome their injury and once again contribute to their team.

The themes in the return-to-play phase included;

1. A growing sense of confidence in their abilities, as well as a feeling of satisfaction in regard to having worked hard and accomplished a return to their sport.
2. A regaining of enthusiasm and excitement for playing.
3. Apprehension and doubt concerning their return as the athletes were cautious about their return, confused about what they were able to do, timid concerning their effort and intensity, and even superstitious about their future health and injury.
4. An ongoing desire to be understood, encouraged, and supported by their coaches and teammates.
5. A continued fear of re-injury and concern for future injury.

Phenomenology has a long history in philosophy and sociology, as the phenomenologist is concerned with attempting to understand human behavior through the eyes of the subjects in the study (Neutens & Rubinson, 1997). Although some qualitative work has been conducted, much more qualitative inquiry is needed in order to more fully understand the feelings, cognitions, and perspectives of athletes experiencing injury (Bianco, Malo; & Orlick, 1999; Gould et al., 1997a, 1997b; Rose & Jevne, 1993; Shelley, 1999; Udry et al., 1997).

Summary

Physical injury is essentially a negative experience that athletes typically and fervently try to avoid, but the rigorous, physical, competitive nature of organized sport often makes avoidance difficult (Pargman, 1999). In fact, eight out of every ten athletes will be injured at some point in their career, frequently while at college, and will miss at least three weeks of practice and competition (Henderson & Carroll, 1993). It may be concluded that sport is clearly a breeding ground for physical injury (Pargman, 1999).

Of the many challenges that an athlete faces, one of the most difficult tasks may be that of coping and recovering from an injury (Pederson, 1986). When an athlete is injured, he or she may experience several forms and feelings of alienation. One of these is a feeling of powerlessness as the athlete loses the freedom to do what he or she once did. The athlete may also experience anomie, isolation, and meaninglessness (Thomas & Rintala, 1989). The severity of the injury in terms of pain, persistence, and disruption of normal activities may effect these emotions and behaviors (Grove & Gordon, 1992). Also, not practicing, competing, traveling, or participating in a normal routine often leaves athletes unable to make sense of the apparent rejection by coaches, teammates, friends, classmates, or even family members (Shelley, 1998). As a result, change in daily routine is often a stressful event, especially when the lost activity is one that is greatly valued (Deutsch, 1985).

Well-adjusted individuals can pass through their injury experience with little problems, but individuals with more problematic adjustments may find injury and rehabilitation very difficult (Ogilvie & Howe, 1986). It is not the uncontrollable act of an injury per se but how the athlete interprets and perceives the injury that creates feelings

of anxiety, depression, and anger. Factors influencing the injury reaction include; the unique nature of the loss, the social system of the athlete, the injured athlete's coping behaviors, personality and mental health, the athlete's level of maturity and intelligence, and the athlete's social, cultural, ethnic, and religious and/or philosophical background (Henschen & Shelley, 1999). In short, each athlete is unique in their emotional response to injury (Shelley, 1998). Yet, commonalties do exist across athletes coping with athletic injury. These commonalties must be further explored.

Chapter 3

METHODS AND PROCEDURES

Research Design

A qualitative phenomenological methodology was utilized to assess the experiences and perceptions of Division III student-athletes experiencing a season-ending injury. According to Dale (1995), researchers in the field of sport psychology can learn a great deal about the experiences of athletes if athletes are given the opportunity to express their feelings via interviews where they are free to describe their experiences. Qualitative research designs and the use of semistructured interviews are effective tools for exploring student-athlete experiences. In fact, Evans and Hardy (1995) suggested and stated:

> There is a need for more qualitative research because such methods are better able to detect the complexity involved in health psychology in general, and the psychology of athletic injury in particular.

Similarly, Shelley (1999) stated:

> ...in order to study the injury experience, one must study the person in context (i.e., throughout the injury), for it is there that the person's values and true experiences become known.

Although several descriptive qualitative methods exist (e.g., ethnography, grounded theory, case study) a specific methodology is determined by the nature of the research question (Morse, 1994). For example, if the question concerns the *nature* of a phenomenon, the answer is best attained using ethnography. Ethnography is focused on exploring how communities are created and held together by human interaction. If the question concerns the *experience* and the phenomenon in question is a *process*, the method of choice would be grounded theory. Grounded theory is focused on developing theory that is grounded in data systematically gathered and analyzed (Strauss & Corbin,

1994). If the research question concerns the *meaning* of a phenomenon, then the method that would best answer the question is phenomenology (Morse, 1994). Phenomenology focuses on describing an individual's experienced meaning by way of his or her own words, overt actions, behaviors, and the cognitive interactive processes present (Shelley, 1998).

A phenomenological study is one that focuses on descriptions of what people experience and how it is they experience what they experience (Patton, 1990). A characteristic of phenomenological research is that it begins in the "life world" or lived experience (Manen, 1990). Phenomenological research does not start or proceed in a disembodied fashion. It is always a project of someone: a real person, who, in the context of particular individuals, social and historical life circumstances, sets out to make sense of a certain aspect of human existence (Manen, 1990). Phenomenology differs from other qualitative inquiry in that it attempts to gain insightful descriptions of the way individuals experience their worlds pre-reflectively, without classifying or abstracting it. So phenomenology does not offer the possibility of effective theory to explain and/or control the world, but rather it offers insights into that which bring a person in more direct contact with his or her world.

When a phenomenologist asks for the essence of a phenomenon-a lived experience-then the phenomenological inquiry is not unlike an artistic endeavor. A creative attempt to somehow capture a certain phenomenon of life in a linguistic description that is both holistic and analytical, evocative and precise, unique and universal, powerful and sensitive (Manen, 1990). Because phenomenology is meant to

study how people verbally describe their experiences, it is believed that such a design provides new insight into the sport injury experience (Shelley, 1998).

This study was designed to examine season-ending injuries, as the research question was directed toward understanding each athlete's meaning of his or her lived-experience. This study assessed each athlete's unique injury experiences as perceived by the athlete throughout his or her injury and rehabilitation.

Subject Selection

Athletes

Participants were nonrandomly selected as outlined by Lincoln and Guba (1985). Subjects were not excluded based on their year in school (i.e., freshman, sophomore, junior, senior), the time of season their injury took place (i.e., beginning, middle, or end), or their role on the team (i.e., starter vs. non-starter). Three participants were selected based on the following criteria: (a) the injured athlete was an active member of one of the men's or women's intercollegiate athletic teams at Ithaca College (varsity or junior-varsity), (b) the athlete was diagnosed with a season-ending injury resulting in that athlete being away from practices and games for the remainder of their season as determined by a member of the Ithaca College sports medicine team, and, (c) the athlete was willing to participate in the study by signing the required informed consent form.

Each athlete was interviewed on three separate occasions, being asked a series of questions specifically designed to assess each athlete's unique injury experiences. All athletes were interviewed in accordance with the following schedule; (a) two weeks after their injury was diagnosed as season-ending, (i.e., in order to give the athlete some time experiencing day-to-day life with their injury, while the situation was still relatively

new), (b) after completing half of the projected rehabilitation, (i.e., in order to gain the athlete's perceptions of what rehabilitation was like and how it felt to be half way through rehabilitation), and (c) two weeks prior to the projected completion date of rehabilitation, (i.e., in order to assess the athlete's feelings as they came close to completing their rehabilitation and were able to reflect on how their perceptions might have changed throughout this process).

When an Ithaca College student-athlete was diagnosed with a season-ending injury, a member of the Ithaca College athletic training staff approached the injured athlete concerning the athlete's potential involvement in the study. If the athlete was interested, the athletic trainer provided a recruitment statement (see Appendix A) to the injured athlete, and requested that the injured athlete give written permission (see Appendix B) so the athletic trainer could contact the primary investigator regarding their willingness to participate. If the injured athlete refused to give written consent for the athletic trainer to call the primary investigator, the primary investigator was not notified and the athlete was not a candidate for this study. However, if the injured athlete agreed to give written consent, the primary investigator was contacted by the athletic trainer. It was then the primary investigator's responsibility to contact the injured athlete and set up a meeting for a more in-depth description of the research project and to attain informed consent from the participant (see Appendix C). Appendix D contains all biographical information (i.e., obtained at the onset of the first interview) for each of the three athlete participants. Although not a requirement of this research project, all three participants suffered the same injury (i.e., an anterior cruciate ligament tear).

Athletic Trainers

In an attempt to triangulate and strengthen the data through multiple informants, the primary athletic trainer working with each selected injured athlete was approached and asked to participate in the study (See also Appendix A for athletic trainer recruitment statement). After understanding the nature of the study, each athletic trainer was then asked to sign the required consent form (See also Appendix C). Following informed consent, each trainer was interviewed once, after the athlete had completed half of their projected rehabilitation. Questions asked of the trainers were focused on the injury experience for the athlete as perceived by that specific athletic trainer. Appendix D also contains all biographical information for each of the three athletic trainer participants.

Instrumentation

In order for a qualitative phenomenological design to be successful the interviewer must have effective attending, listening, verbal, and non-verbal skills. The goal of the interview is to create an environment that is comfortable, non-threatening, and secure for the interviewee. This environment is created to enhance the possibility for a successful interview and produce a positive rapport with the interviewee. A good interview consists of both positive verbal and non-verbal interactions between two or more people (Fenalson, Ferguson, & Abrahamson, 1962).

Attending Skills

The function of attending skills is to encourage the person to talk. According to Pederson and Ivey (1993), by attending, the interviewer will demonstrate interest in what is being said, awareness of patterns in the interview, the ability to change patterns, and a greater understanding of the meaning of the interview. Ivey (1988) identified four

dimensions of attending skills. The first dimension is the use of the eyes. In some cultures direct eye contact is desired, in other cultures it is not. In all cultures the eyes are used to convey meaning and interest. The interviewee's pattern of preference in using eye contact should be noted early and modeled by the interviewer. The second dimension is the use of body language. While this is more ambiguous and difficult to interpret, it can provide non-verbal information about the interview. If a person's verbal messages are saying one thing and their body language is saying something else, the body language is more likely to be believed. The interviewer must pay attention to the interviewee's body language (i.e., glances, gestures, bodily reactions, and pauses) while listening carefully to what is being said. The third dimension is vocal qualities. Tone of voice and speech rate can communicate much about another person. Tone and rate can communicate caring and involvement or isolation. According to Evans, Hearn, Uhlemann, and Ivey (1998) if the interviewer talks in a rapid and abrupt voice this may give the interviewee the impression that he or she is wasting the interviewer's time. If the interviewer talks in a bored voice, the interviewee is unlikely to reveal important information about him or herself. Evans et al. (1998) stressed the importance of talking in a warm and expressive voice to help the interviewee relax and concentrate. The fourth and final dimension of attending is verbal tracking. Staying with the interviewee is essential, however complicated, confusing, or indirect the wandering conversation might become. If possible it is better not to change the subject but to stay with the interviewee on their own terms until they are satisfied that they have told the interviewer what they want or need to say. To enhance the conceptual basis of attending, the interviewer must focus on the person being interviewed, know

their most comfortable patterns of attending, and listen for cues that signify a contradiction in verbal and nonverbal communication.

Listening Skills

The most fundamental prerequisite for any interviewer is the ability to listen. Effective listening demands not only that the interviewer hears and understands what is being said but also that he or she hears and understands what is communicated through silence. To listen effectively, one should abandon or put aside all prejudices, pre-formulations, and daily activities (Fenalson, Ferguson, & Abrahamson, 1962). Three levels of listening include inefficient listening, minimal listening, and active listening (Yukelson, 1998). Active listening is what an interviewer must strive for to ensure a productive interview. Active listening is characterized by listening for main and supportive ideas, giving feedback, focusing on emotions and feelings, and being attentive to verbal and nonverbal aspects. Inefficient listening (i.e., selective listening) is characterized by tuning in and out while preparing what to say next, resulting in misunderstandings and hurt feelings. Minimal listening is characterized by hearing the words and sounds but not getting beyond the surface meaning, while at the same time, missing the emotions and feelings the other person is trying to express.

Barbera (1958) stressed four salient components required of an artful listener. The first component is concentration that allows for patience with oneself and the removal of distractions in the paths of listening. The second component is active participation, which involves keeping one's mind in a state of relaxed alertness, open and flexible to all relevant changes in a given situation. The third component is comprehension, by understanding the true idea or meaning of what is heard. And finally, the fourth

component is objectivity, or hearing the other person without imposing any preconceived notions or opinions.

By combining the interview skills outlined (i.e., attending, listening, verbal, and non-verbal skills) with the use of an interview guide (see following section), the interview can remain focused while still allowing individual perspectives and experiences to emerge (Patton, 1990). As stated earlier, it is important to create a non-threatening environment so the participant is comfortable in sharing his or her experiences. As a result, the investigator can obtain quality data to answer the outlined research question.

Interview Guide

In-depth, semistructured interviews were conducted for data collection. Interviews of athletes and their trainers took place according to the aforementioned interview time schedule (i.e., athletes were interviewed two weeks after their injury was diagnosed as season-ending, the midpoint of their projected rehabilitation, and two weeks prior to the completion of their projected rehabilitation; athletic trainers were interviewed at the projected midpoint of the athletes rehabilitation). Semistructured interviews contain a core of structured questions from which the interviewer may move in related directions for in-depth probing (Neutons & Rubinson, 1997). This allows for accurate collection of information from certain questions with a built-in opportunity for exploration.

The goal of a phenomenological interview is to obtain a first person description of some specified domain of experience (Patton, 1990). Not only does dialogue allow the person being interviewed the opportunity to describe his or her experiences, but it also requires him or her to clarify meaning, and perhaps, even realize it for the first time (Dale, 1995). The phenomenological interview allows the person being interviewed to be

the expert, as opposed to the researcher in more standardized modes of inquiry (Dale, 1995).

The interview guides (see Appendices E and F for both athletes and athletic trainers), were presented to each participant to ensure that basically the same questions were asked to each of the injured athletes and their trainers. The interview guide questions were derived from a combination of a review of the existing literature and faculty consultations.

Following each interview, investigator knowledge was bracketed to portray as accurately as possible the reality described by each injured athlete and trainer. To bracket the phenomenon under investigation, the following five steps, as suggested by Denzin (1989) were followed;

1. Locate within the personal experience, or self-story, key phrases and statements that speak directly to the phenomenon in question.
2. Interpret the meanings of these phrases as an informed reader.
3. Obtain the participant's interpretation of these findings, if possible.
4. Inspect these meanings for what they reveal about the essential, recurring features of the phenomenon being studied.
5. Offer a tentative statement or definition of the phenomenon in terms of the essential recurring features identified in step 4.

All interviews were conducted in a private office located in the Center for Health Sciences building on the Ithaca College campus. Following each taped-recorded session

(i.e., using a hand help tape-recorder), entire interviews were transcribed and reviewed by the primary researcher to detect errors or omissions that may have occurred during the transcribing. The primary investigator conducted all the interviews and transcribed all of the data.

Journal Recording

According to Janesick (1999) when participants keep a journal, it offers a way to triangulate data and pursue interpretations in a dialogical manner. Journal recordings were completed by the injured athletes to describe their weekly experiences (i.e., one journal entry per week) and emotions as they worked through their injury and rehabilitation. According to Patterson and Welfel (2000), journals can be a resource for defining problems and for understanding the variations in the intensity of problems from day to day. A journal recording guide (See Appendix G) was given to each athlete to ensure that the same questions were asked across subjects.

Observations

In an attempt to further triangulate the data and strengthen the study, multiple informants (i.e., athletes and athletic trainers) were combined with multiple methods of data collection (i.e., interviews, journals, and observations). Athletes were observed in their rehabilitation settings 2-5 times per week until their rehabilitation was complete. By observing the injured athletes during their rehabilitation, a greater understanding and in-depth description of the "lived experience" was documented. According to Patton (1990) there are several advantages to observation, including;

1. By directly observing program activities, the investigator is able to understand the context within which the program operates.

2. The firsthand experience with a program enables the investigator to use the inductive approach, which entails complete immersion in the details and specifics of the data to discover important categories, dimensions, and interrelationships.
3. The investigator can observe things that are routine to those in the program.
4. The investigator can learn things about the program that cannot or will not be revealed in an interview.
5. The investigator is able to present a comprehensive view of the program because he or she can move beyond the perception of the participants.
6. The investigator uses his or her knowledge and experience in terms of feelings, reflections, and introspection about a program.

Qualitative observation is fundamentally naturalistic in essence. Observational data are recorded at the same time a behavior pattern is occurring. This allows the investigator to get a true sense of individual behavior under real and accurate circumstances (Adler & Adler, 1994). Qualitative observers are thus, free to search for concepts or categories that appear meaningful to subjects.

In summary, interview, journal, and observational data were collected from the athletes and athletic trainers in accordance with the following time line (see Figure 4).

Data Management

Data generated by qualitative methods are voluminous making it imperative that researchers have some initial framework for managing the data collected during fieldwork (Patton, 1990). The challenge is to make sense of massive amounts of data, reduce the volume of information, identify significant patterns, and construct a

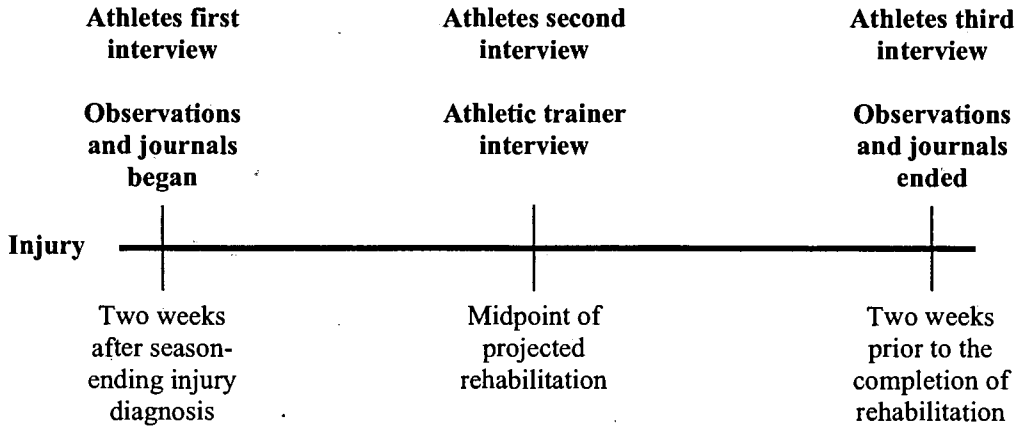

Figure 4. Data collection time line.

framework for communicating the essence of what the data reveal (Patton, 1990). According to Shelley (1998), the overall strength of this design, as well as any other qualitative method, depends upon the investment of time by the researcher in maintaining the rudiments of qualitative inquiry, appropriately selecting the research question, maintaining meticulous records of interviews, observations, and journals, and properly analyzing and presenting the results. Adherence to such protocols is often termed rigor in qualitative research (Burns & Grove, 1987).

Managing qualitative research is labor intensive and this process (i.e., organization) demands intellectual discipline, analytical rigor, and a great deal of hard work (Patton, 1990). But, because different people manage their creativity, intellectual endeavors, and hard work in different ways, there is no right way to go about organizing, analyzing, and interpreting qualitative data (Patton, 1990).

Because qualitative inquiry entails the analysis of words rather then numeric data, all findings must be well organized and properly managed (Shelley, 1998). This is especially true because there is typically not a precise point at which data collection ends and analysis begins (Patton, 1990). Since one cannot analyze an entire text simultaneously, one must break it down into manageable units (Giorgo, 1985). These manageable units are the essence of qualitative data analysis and without proper data management (i.e., a plan) by the researcher, data analysis will be compromised. Therefore, the management of the data must be a priority before and during the data analysis process.

Data Analysis

Each injured athlete's oral description of his or her injury experiences, as well as each trainer's descriptions, journal recordings, and all observational field note data were analyzed using the following eight analytical steps:

1. All participants' oral descriptions of their injury experiences were read in order to obtain a "feel" for them. By reading each data set several times, a sense of what was explained and discussed was better understood.

2. From each transcript, significant statements and phrases that directly pertained to the research question were extracted.

3. Meanings were formulated from these significant statements and phrases as they related to the injury experience. For example, one meaning unit may be comprised of fourteen significant statements that were similar in content and wording.

4. The formulated meanings were then synthesized into clusters or lower-order themes. Again, similar meaning units were combined to form a single lower-order theme.

5. The clustered, lower-order themes were then synthesized into higher-order themes. These higher-order themes became the descriptors of the combined lower-order themes. Throughout all analytical steps, original wording and phrases were maintained and included to capture as much of the "experience" as possible. It was these higher-order themes that comprised the initial description of the injury experience for each participant.

To illustrate the data analysis process more clearly (see Figure 5), significant statements (extracted from a verbatim-transcribed data set) 3, 4, 12, and 13 might be

Transcribed Data-Set	Significant Statements	Meaning Units	Lower Order Themes	Higher Order Themes
	1.	1. (3, 4, 12, 13)	1	1.
	2.	2.	2. (4, 6, 15)	2.
	3.	3.	3.	3. (6, 8)
	4.	4.	4.	4.
	5.	5.	5.	5.
	6.	6.	6.	6.
	7.	7.	7.	
	8.	8.	8.	
	9.	9.	9.	
	10.	10.	10.	
	11.	11.		
	12.	12.		
	13.	13.		
	14.	14.		
	15.	15.		
	16.			
	17.			

Figure 5. Example of data analysis procedure (Steps 1 through 5)

combined to formulate meaning unit number one. Similarly, meaning units 4, 6, and 15 might be combined to formulate lower-order theme number two. Finally, lower-order themes 6 and 8 might be combined to formulate higher-order theme number three. This step by step process continued until all higher-order themes had emerged from each data set (i.e., athlete interviews, trainer interviews, observations, and journals), across all three subjects.

Each injured athlete's oral description of his or her injury experiences (i.e., three athletes interviewed on three separate occasions), each trainer's descriptions (i.e., interviewed once), journals, and all observational field note data were content analyzed and took the form of higher-order themes (see Figure 6).

6. Once all higher-order themes emerged, step six in the analytical process was conducted. By way of the constant comparative method, higher-order observation themes were compared to and integrated with each athlete's first, second, and third interview themes. Similarly, journal higher-order themes were compared to and integrated with each athlete's first, second, and third interview themes. Finally, each trainer's higher-order themes were compared to and integrated with each athlete's first and second interview themes. These exhaustive, "final higher-order themes" comprised the final description of the injury experience for each athlete at each phase (see Figure 7).

7. The final higher-order themes for each of the subjects (i.e., phase 1, 2, and 3) were then compared across subjects to determine the similar themes in each of the three phases (see Figure 8). These similar themes represent part of the results of this study (see step 8 below) and the answer to the research question investigated.

Data Source	Subject 1	Subject 2	Subject 3
Athlete Interview 1 (Phase 1)	8 Higher-order themes	7 Higher-order themes	6 Higher-order themes
Athlete Interview 2 (Phase 2)	8 Higher-order themes	6 Higher-order themes	6 Higher-order themes
Athlete Interview 3 (Phase 3)	4 Higher-order themes	9 Higher-order themes	5 Higher-order themes
Trainer Interview	3 Higher-order themes	4 Higher-order themes	3 Higher-order themes
Athlete Journal	3 Higher-order themes	2 Higher-order themes	4 Higher-order themes
Researcher Observations	2 Higher-order themes	1 Higher-order themes	1 Higher-order themes

Figure 6. Example of possible (i.e., hypothetical) higher-order themes. Note: These are not the actual numbers of the emergent themes in this study.

Subject	Phase 1 Higher-Order Themes	Phase 2 Higher-Order Themes	Phase 3 Higher-Order Themes
Subject 1	Observations (2) Athlete Journals (3) Trainer Interview(3)	Observations (2) Athlete Journals (3) Trainer Interview(3)	Observations (2) Athlete Journals (3)

Integrate & Compare ↓ | Integrate & Compare ↓ | Integrate & Compare ↓

Subject	Phase 1	Phase 2	Phase 3
Subject 1	Interview 1 Higher-order themes (8)	Interview 2 Higher-order themes (8)	Interview 3 Higher-order themes (4)

↓ | ↓ | ↓

Subject	Phase 1	Phase 2	Phase 3
Subject 1	Final higher-order themes	Final higher-order themes	Final higher-order themes

Figure 7. Example of final higher-order themes. This process took place with each individual subject (i.e., three subjects).

Phase	Subject 1		Subject 2		Subject 3		Similar Themes
Phase 1	Final Themes	↔	Final Themes	↔	Final Themes	→	Similar Themes
Phase 2	Final Themes	↔	Final Themes	↔	Final Themes	→	Similar Themes
Phase 3	Final Themes	↔	Final Themes	↔	Final Themes	→	Similar Themes

Figure 8. Example of similar themes

8. Once the similar higher-order themes were identified across all three subjects for each phase, the dissimilar themes were identified. In discussing the dissimilar themes for each participant across each phase, the individual's entire lived experience was exposed, allowing for a complete answer to the research question investigated.

Managing the data in this way provides a longitudinal look at the three phases (i.e., from initial injury throughout rehabilitation). For example, each athlete's injury experiences could be examined individually (i.e., a particular athlete's higher-order themes at a particular phase), in relation to other participants (i.e., a particular athlete's higher-order themes at a particular phase in relation to any other athlete's higher-order themes at that same phase), or compared to several other participants (i.e., a particular athlete's higher-order themes at a particular phase in relation to the common themes across all participants). According to Shelley (1998), by way of this cross-case comparison, the lived experience of athletic injury can be more thoroughly described because one can compare others (i.e., several participants) in somewhat similar contexts (i.e., phases).

Establishing Trustworthiness

In an attempt to maintain methodological rigor, Lincoln and Guba (1985) suggested that trustworthiness be established to the extent that a research study is worthy of consideration by the reader. According to Rubin (2000), manuscripts reporting qualitative studies should report observations and findings in a thorough manner that enables readers to gain an in-depth understanding of the phenomenon being studied and that provides a compelling case for the author's interpretations. Several techniques were

used to establish credible and trustworthy data. This study incorporated member checks, a peer debriefer, a study auditor, and thick description.

According to Janesick (1994), validity in qualitative research has to do with description and explanation, and whether or not a given explanation fits a given description. Member checking contributed to the credibility of the study in that participants of the study were allowed to review their finalized interview transcriptions. Member checking allowed the athletes and trainers to make comments concerning the accuracy of the interview content and to verify the data transcription.

The role of a peer debriefer entailed holding the primary investigator accountable for his data management and interpretations by providing an external check of the research process. Lincoln and Guba (1985) defined the role of a peer debriefer as a "devil's advocate", an individual who keeps the researcher honest and asks hard questions about methods, meanings, and interpretations. Joshua McCaig, a masters student at Ithaca College in the Department of Exercise and Sport Sciences, functioned in the role of the peer debriefer. Joshua explored my biases in interpreting, managing, and reporting the data collected.

A study auditor examines both the process and the product of the research. In assessing the product, the auditor examines whether or not the findings, interpretations, and conclusions are supported by the data (Creswell, 1998). Dr. Greg A. Shelley fulfilled the role of the study auditor. Specifically, Dr. Shelley examined, from start to finish, the sampling, measurement, and analyses protocols.

As a final means to establish trustworthiness, thick description of the analytical processes were presented. According to Denzin (1989) the discipline and rigor of

qualitative analysis depend on presenting solid descriptive data, what is often called "thick description", in such a way that others reading the results can understand and draw their own interpretations. Thick description is the presentation of rigorous data collection, management, and analysis procedures that focus and describe the phenomenon under investigation. Thick description evokes emotionality and self-feelings. It establishes the significance of an experience, or the sequence of events, for the person or persons in question. The data management protocols outlined here provided a thick description in that the reader is provided the opportunity to examine descriptive data for each participant, across each of the outlined injury phases.

Chapter 4

RESULTS

The current study was designed to explore the following research question: What do Division III collegiate student-athletes experience following a season-ending injury? Raw data from in-depth semistructured interviews with three injured athletes (i.e., nine athlete interviews), their head athletic trainer (i.e., three additional trainer interviews), individual athlete journal writings, and observational field note data provided the basis for the following results.

Separate higher-order themes for each of the three athletes (i.e., participants 1, 2, and 3), their head athletic trainer, journal writings, and field note data are presented in Appendices H, I, and J, respectively. Total higher-order themes numbered 31 for Participant 1, 28 for Participant 2, and 34 for Participant 3. Final themes (see Appendices K, L, and M) numbered 25 for participant 1, 21 for participant 2, and 26 for participant 3.

Each of the athlete's final, higher-order themes was compared across subjects, resulting in 9 similar (i.e., common) themes (see Appendix N) and 38 dissimilar (i.e., non-common) themes (see Appendix O). What follows is a summary of the similar and dissimilar experiences of the three injured athletes, across each of the outlined injury and rehabilitation phases.

Similar Themes Phase 1

Although ready for the challenge, confident, and motivated, the athletes realized that rehabilitation would be painful, demanding, and difficult.

In discussing his overall experience with rehabilitation, participant 1 made the following statement:

> I have a good work ethic but it takes a lot of mental capabilities to focus myself on rehabing every day and saying is it worth it to go through four months of hell, four months of stuff I really don't want to do, four months of stuff I have to give up, you know some of the stuff that I will have to give up in order to focus on this and get better. I think that might be the hardest part, just putting this as a priority.

When asked about his confidence and motivation in regards to his rehabilitation, he explained:

> As long as the surgery goes well, I have complete confidence in myself. I think I have a pretty good work ethic so, hopefully I'll be one of those people who rehabs in four months instead of eight. Yea, I'm pretty confident about that.

Participant 2 expressed the following feelings about the pain she might experience:

> I'm really scared about right after the surgery. I have heard it is very painful. I plan on starting [Rehab] the day after I get out [of surgery]. You know the day after I get out to do rehab and it's not going to be fun. I am really scared about the first few weeks to the month.

Although participant 2 had significant fears of rehabilitation, she also possessed a high level of confidence that she would recover fully, as stated in the following passage:

> I'm very confident, I haven't thought that I can't um…I haven't had any doubts, I'm not scared about it. I'm not worried what so ever um…I'm not worried that I'm not going to get back.

Participant 3 explained his feelings about rehabilitation when he said:

> I know the rehab is going to be real…real tough, so I'm sure that's going to be harder than any pre-season endurance shaping or anything like that. I'm sure that this rehab is going to be a lot more then that. I got to work a lot harder now to get back to where I was and a…I've never experienced anything like that, so. I got to kind of push myself maybe a lot harder then I've ever been really used to.

Although he understood the difficulties associated with rehabilitation, he had a strong desire to recover completely, as shown in the following statement:

> As far as the rehab goes I'm confident that I'm going to get back and I'm going to try my hardest and do whatever I can. But as far as, I know it's going to be tough to get from there [start of rehab] to there [in-season shape].

Injury affected the athlete's day-to-day lives (e.g., they needed extra time to get to classes, they were unable to participate in desired activities, and some could not even drive a car).

In discussing his initial experience with crutches and getting to classes, participant 1 explained:

> When I first started when I had the crutches…I would go about ten minutes earlier and now I can just walk but I have certain classes being a Phys. Ed. Major, like gymnastics, I can't really participate, and dancing.

Participant 2 also explained her feelings toward using crutches:

> Well, crutches pretty much suck basically. So that was a pain for a week. I was on those for a week and it was really tough, leaving 20 minutes before class instead of five or ten to get down there even though they understand [teachers] if you walk in late you still feel dumb walking in late in front of everybody. Um…so that changes a lot, I had to get up earlier to do that um…

In similar fashion, while explaining the difficulties in getting to class, participant 3 stated:

> …as far as walking to classes that's kind of a pain cause it's up, up and down hills, up and down stairs and that can get sore. When I sit with my knee bent for a long time in class it gets sore so, it's just a nagging thing, [I] just kind of want to be done with it.

Participant 2 described the everyday hassles that she experienced with her injury when she stated:

> …showers are more difficult. It's a lot better now but at first it just feels uneasy and the question in my head is if I am going to walk on this…I just wasn't too sure of it, it's not very stable…so showers are no fun. So that is a lot different. Just basically having to be on crutches and doing everything on crutches.

Participant 3 explained his dependence on others when he stated, "…for the first couple of weeks a… when I got hurt I couldn't drive, I couldn't barely walk so that was tough for me, so they [friends] kind of carted me all over the place." Participant 1 talked about the impact his injury had on his social life when he explained:

> It is kind of frustrating. Sometimes your friends forget and they are like, "do you want to go play ball"?, and I'm like, "I can't", and they are like, "Oh! I forgot", you know it's kind of like...kick me in the butt and whatever.

The athletes' support systems primarily consisted of friends and family.

When asked about his support system and who had been there the most for him, participant 1 stated, "Definitely my friends you know, they are always there you know asking me how the knee's doing and when are you getting surgery, that type of thing. After that it would be my parents." Similarly, participant 2 explained, "Friends being there which is huge. My roommate, my best friend here, basically reinforcing me that everything is going to be fine." Participant 2 also had significant support from her family as stated in the following:

> They came down this past weekend for the games even though I wasn't playing, um...they came down one Saturday just for a few hours and stayed and just...put it like this, they wanted to come down and do anything for me that I couldn't do...they have been in more contact then usual which is just natural if I am going through something like this.

When asked who had been his greatest source of support, participant 3 explained:

> ...my parents, my friends are there, my friends are real good. Um, my girlfriend has been there for me when I have needed her. Um, pretty much, everyone has been pretty helpful, my parents definitely a...even though they worry a lot they've a...come down, they came down as soon as they found out to make sure I was alright, you know, so they've been there for me.

Participant 3 later discussed the relationship he had with friends:

> I think I got a pretty tight group of friends. They've generally done anything they could for me...I mean...they're always like whatever you need, if you need something let me know. If I need a bag of ice for the crio-cuff machine they'll run out and pick it up for me, stuff like that. When they run off to the store or whatever, they're like do you need anything, how can I help you out. They're always willing to bring me to the doctors if I needed to, stuff like that so...they're just helpful.

Significant concerns were expressed as they began to process the magnitude of their injuries.

Participant 1 voiced his concerns about coming back from his injury when he stated:

> Um, maybe, from a mental aspect you know like maybe having it happen again maybe that would be in the back of my mind. Um, getting back into basketball shape and a...flexibility, and getting my range of motion back, so I guess those are the three things that I have been thinking about lately.

In discussing her concerns participant 2 explained:

> Um...being sure of it, twisting on it, running on it. I can't picture the feeling. I don't know how to put it. It is hard for me to think about the first time that I am going to run or...just the first time I turn the wrong way and kind of shock myself.

When asked about his greatest concerns, participant 3 said the following:

> Just that it won't be normal again. Just that I won't be back to full strength. You know that just worries me. I don't really want to wear a brace. I don't want to be restricted or anything like that and I'm worried that if I don't, I don't do those things that maybe I won't be back. Maybe I can never be back to normal. I'll never be at my full strength or never really rely on it. I'll always be second guessing myself is my biggest worry.

Dissimilar Themes Phase 1

Although each athlete had some similar experiences with his or her season-ending injury, there were many dissimilar responses and situations that captured each individual's unique lived experience. These dissimilar themes provide a greater understanding of the athlete's injury situation (see Appendix O). The following are the dissimilar themes that emerged for each participant during the first phase.

Participant 1

He was coping with his injury by participating in some form of physical activity, such as continuing to lift weights with his upper body and doing his pre-surgery rehabilitation three days a week.

In discussing how he coped with his injury, participant 1 stated:

> The biggest thing is just trying to create some sort of physical activity that I can do, just relax my body a little bit and my mind to get some peace. I normally lift weights because I can still do that with my upper body and light weights with the legs just to keep them in shape, rehab the knee a little bit, other then that not really.

He also explained the difficulties of not being active as he said, "I hate being a lazy body and I need to be up at something, even if it is just walking around." Having his normal physical outlet taken away, due to the severity of his injury, created a significant craving for some type of physical release.

He was extremely surprised, frustrated, angered, and felt isolated by his coaches' and athletic trainer's lack of contact, support, communication, and guidance.

When asked how he was treated by his coaches after his injury was first diagnosed as season-ending, he stated:

> ...the coaches weren't as social or they didn't really communicate with me as much just because I wasn't part of that game or part of that practice. If I saw them in the hallway they would be like "how is the knee doing?" or whatever, but as far as like be here at such and such a time, or my role as a team member kind of diminished they didn't really speak to me in that manner anymore. I guess it is to be expected because you move to like the last spot on the bench instead of being in the middle but...

When asked if he was surprised by his coaches' reaction, he stated:

> Yea, I thought so. It would make me feel a little better if they gave me a phone call every two weeks to see how I was doing, because I don't necessarily see them in the hallway...

In addition to being surprised the athlete was also a bit confused as to why his coaches would treat him in such a manner:

> It's kind of hard to put my finger on it, it just seems funny that they're not contacting me or just being a little more supportive or, like I said before... they put me on the backburner and it just seems like I'm the last man again and that I have to work my way back into their thinking process, as a part of the team. It's just weird, I don't know how to explain it. It's not what I expected.

Unfortunately, participant 1 also experienced similar feelings toward the athletic trainers who were working with him, as he explained:

> ...everything was good. I had my injury and they were working with me every day and as soon as the orthopedic found out through the MRI that I had it, an ACL tear, it was pretty much like that was it and I really hadn't heard from them since. I kind of expected that they would at least contact me a little bit especially the head trainer, maybe even the student trainer.

Participant 1 went on to explain a situation that occurred when he saw his athletic trainer in the hall and was given a surprised look, as though the trainer had forgotten him.

> ...you see him and it's like Oh yea, like you know, "how's the knee"? Like he has ten-thousand other things to remember but that kind of insulted me because personally I feel that my injury is just as bad as anyone else's, anyone else's broken thumb or anyone else's sprained ankle.

His surgery date created a significant amount of anxiety (e.g., he had no control when it was to take place because it was up to his parents) and worry (e.g., if his surgery ended up being postponed he felt he may not be ready for the next season).

Participant 1 explained the frustration of not having control over when his surgery took place, when he stated:

> I'm pretty much at the mercy of what my parents want. I don't really care where I have my surgery whether I have it here [school]. I'm comfortable with Dr. XXXXX. Or whether they want me to go home, I guess the decision is kind of whether to do it now or later is strictly how many days of school I will miss. My parents aren't really keen on me missing a whole week of school, but if I could miss maybe two or three days they could accept that and let me get the surgery a little earlier.

When asked if he wanted his surgery sooner as opposed to later, he responded:

> Oh Yea! Yep just because I don't really want to have my summer hobbling around or come next season I want to be ready to play…It's my senior year, I've played forever and I want to go out with a strong season.

Participant 1 added further when he said, "If I get it after the semester is over I might be a little frustrated with that because it wastes my summer away and I won't be ready to play next season."

Participant 2

When the injury initially occurred she was hopeful that it was just a bad knee twist yet she starting thinking about her opportunity to start, competing again during the season, and questioning why this had to happen.

When asked if she knew immediately that her injury would cause her to miss the entire season, she replied:

> No, I was still kind of up in the air. I remember going to the hospital and just, I don't know, I guess I was just back and forth. I thought and then it would feel all right and I'm like "no, you know" that I did something different or a bad twist, I don't know, I have never done anything like that before that is why I didn't really know.

She also stated:

> I remember laying in my bed at the hotel on Thursday night [the day the injury occurred] and a couple of my friends, really close friends who are all from here came to the hotel and I just remember laying there with my leg in a immobilizer and everything and just everything was fine. I wasn't depressed and down so I think that was a sign that I didn't think it was that [a season-ending injury].

Although she was uncertain of the severity when the injury initially occurred, she did begin to questions why this had happened and started thinking about the opportunity she was given this year.

> I was just thinking about the opportunity I have had to be a starting short stop in a program like this um...I was just thinking about that and just thinking about the rest of the season and the teams that I want to play against...but mostly I had just battled back from a hip-flexor injury and had got cleared the day before we went down there and now a week later there is a season-ending injury so that was kind of going through my head that like...what next and like why?

Thoughts about her surgery created a significant amount of anger and frustration because she and her coach disagreed on when the surgery should have taken place, resulting in her isolating herself from her coach.

Participant 2 had a disagreement with her coach on the timing of her operation which had a significant impact on their relationship, as she stated:

> ...for a while I was pretty distant from my coach. I kind of shut down on her. She was talking to my parents, she called my parents and was kind of worried basically because we had a disagreement about when I should get my surgery done. I wanted to get it done the 26th of April. She wanted me to wait until I got out of school. Um...and I saw that as almost a months different and that was big to me I just wanted to get the ball rolling and I am sick of this already, which is bad because I know I have got a long way to go but I pretty much wanted to get it done so for a little while I kind of closed up on her...

She later went on to explain the emotional toll this disagreement took on her:

> I was very upset about that, that she pretty much didn't give me a choice when I wanted to have it [referring to the date of her surgery] but basically it was right before finals [when the athlete wanted surgery, April 26th] and it would have been a bad time of the year to do it and I'm not going to feel like going to classes and going to finals. When I came back I would have a week left of classes and then finals, so it was understandable, why she [Coach] didn't want me to do it but basically I was just worried about the summer and I wanted to be a month into it [rehabilitation] by the time I got out of school.

Although this athlete gave in to her coach's request and had the operation after school was done she stated, "I am happy with the date but no I guess, I'm not sure how to really explain it, I just wish it was earlier but I also wish that classes were done earlier too."

The week following her ACL diagnosis she experienced pain, depression, and strong negative emotions (e.g., frustration, loss, and much crying).

Finding out that she had indeed suffered a season-ending injury was very difficult for her, as she stated:

> ...the second I found out that (it was a season-ending injury), my emotions were a lot different...so I think that is when it really hit me so that week was really tough...I was very depressed in rehab in things like that um...

She later explained how difficult it was for her when her coach announced to the entire team that she would miss the season.

> ...I remember we had a meeting before practice that day, this was on Monday, and I went in there and coach told everybody and I started to get teary-eyed in there and upset and everything um...I cried a lot basically.

When asked what her dominate emotions were when she was given the news about missing the entire season, she said, "Just depressed and like I don't know, down I guess, frustrated and all that stuff."

She struggled most with her up and down emotions, especially when she thought about her lost opportunity for the season.

In discussing the most difficult aspect of being injured, she explained:

> I think the up and down emotional thing is the probably the hardest and the biggest thing that I have never had to deal with before, um...yea physically it hurts and your able to do less things but for me personally the emotional thing is bigger and it's a lot tougher then not being able to do this or that which it ties into emotional also...

She explained that at night, when she was alone without any distractions, her thoughts would immediately go to her injury and what she was missing out on:

> ...as far as emotionally if I would stop and think about it um...sit down at night and think about the things from before like the people I want to play for, people that I want to see me play um...just how I have to wait until next January to play again things like that...but I guess it is mostly at night when I am settling down, have nothing else to do but think, I guess is when it is still tough.

Participant 3

While acknowledging being moody, depressed, and angry much more often then usual, he felt the most difficult aspects of being injured were coping with his physical restrictions, not being able to do what he wanted, losing his independence both in and outside of sport, mentally overcoming his injury, watching his team play, and hearing teammates complain about practice.

In describing what it was like to watch on the sidelines and unable to participate with his teammates, he explained:

> I mean it is upsetting me that I can't play. It's hard to just sit there and watch and hear people complain about oh practice was tough today, and then I'm sitting on the sidelines going man I wish I could play. So, it's, it's tough to sit on the sidelines…

When asked to describe his mood and how he has felt since sustaining his injury, participant 3 stated:

> Um…it's kind of funny that you would say that because sometimes I feel myself getting almost depressed. Sometimes I get real moody. Like I get upset sometimes and I'm never usually like that so I don't know if it has something to do with my knee but maybe it's that I'm so used to getting rid of my anger, my aggression you know playing, and I don't have anywhere to release that now. I almost feel like I get depressed or angry a lot more then I have before. I don't know if it's cause of my knee but I have noticed that since I got injured.

In summarizing the most difficult aspect of being injured, he made the following statement:

> …just not being able to do what I want to do. I can't work and money is tight. I had two jobs before this and I can't work. I just can't do the things that I want to do, and that's the hardest part. Like when my buddies go out and play football and I can't do that. That's probably the hardest part, just the restrictions that I have.

Not only was he physically restricted but "losing his job" was a significant loss for him:

> Um...the money situation is really frustrating to me too. I'm used to bringing in money and to help with groceries and with rent and with the car payment and utility bills and all that, and I don't have any income and I feel bad asking my parents, but that' the point I'm at. I have to ask my parents and that's kind of a pain in the butt. I'm used to working at least three or four nights a week and I don't do that so I have no income and that's kind of frustrating too, or maybe that's part of my frustration also.

Although comfortable and confident with his surgeon, he was very nervous about having surgery, unsure of the pain to come, and he found it mentally tough knowing that his knee had very little pain, yet in 48 hours he would be unable to walk.

Participant 3 explained his apprehension and fears about having an operation for the first time, when he stated:

> I'm real nervous. I've never been put under. I'm not real sure if they're going to put me under or do the epidural, but...I'm real nervous but I don't know what kind of pain I'm going to be in afterwards or how I'm going to feel, so that makes me kind of nervous. I'm not excited in the least bit, to tell you the truth.

He later explained his worries about things going wrong during the operation and how that could affect his recovery:

> I've heard horror stories that things don't go right in the knee. Your knee doesn't agree with whatever the doctor did. So that could put me back an extra month or something like that or an extra two months. So, it's hard to say, you really never know what could happen.

Not only was he scared about going through an operation but he was having a difficult time with the realization that his leg, which felt good, was going to be much worse after his operation:

> ...it's also a tough thing knowing that here I am, I can walk fine. I can jog around on it, it's not really sore for me or anything like that and knowing in two days I'm going to have surgery on it and then I'm going to be up in this brace and not going to be able to walk around and not going to be able to do anything. It's going to be like they are making it worse for me and that's a tough thing even though it's kind of weird to me that it is going to go from being good to being bad in a matter of 48 hours. I think that is going to be tough to overcome, just the fact that I might

> not be walking on it normal for another month and a half again, where as right now I can walk on it fine.

He felt a bit isolated from the team because he was not playing, but his coach made going to practice important by supporting him and including him in many areas of practice (i.e., warming up the goalies, and giving advice, encouragement, and criticism to teammates and coaches).

He described what it felt like to be around his teammates knowing that he was unable to play:

> You don't feel as much apart of the team when you're not out there. You learn a lot about the kids when you are playing with them. You learn how different people play and everything. Like our freshman this year I'm not getting a chance to feel them out. I can't really feel how they play or anything like that so I'm sure it's going to be more of a learning experience when I have to actually go out there and play with them. I mean I can talk to them and get to know them off the field but it is different when you're on the field.

He later explained his relationship with his head coach, their communication, and what his coach expected from him:

> He was real upfront with me. He said he wants me to help out on the sidelines, he knows that kids kind of, at least some of the kids look up to me so he knows that I can be an encouragement at times or just be an extra pair of eyes. So, maybe I can see something that he doesn't see, or as far as defense goes maybe I can tell a younger guy that he could do something that the coach doesn't really see or something like that.

To cope with his injury he partied (i.e., drank) more than usual, yet also lifted more weights (i.e., upper body) in order to obtain some type of physical release.

When asked if he did anything to take his mind off his injury, he stated:

> Um...Yea, it's probably not the best thing but I've gone out socially a lot more. I've gone to the bar a little more, probably drank a little more then I would if I was in season. I try not to drink when I'm in season but now it's not as hard for me to go to the bar and have a few drinks ...so yea I guess I have done that to kind of cope with it.

In order to obtain some type of physical release, he had been working out in the gym with his upper body as he said, "I've actually spent a lot more time lifting weights, working out a lot more then I did when I was actually playing lacrosse, so that has helped a little bit."

Similar Themes Phase 2

By way of the constant comparative method across each outlined phase, phase two yielded two similar themes.

Dealing with and mentally overcoming their injuries (i.e., fear of re-injury, not being able to play to their full potentials, and trusting their knees) was very difficult.

When asked about his concerns related to making a full recovery participant 1 explained:

> ...it's going to be hard to overcome that mental perspective. Having an injury and not being able to use the leg for such a long time and jump right into it. I think you just have to block it out but work on it.

In discussing her fear of re-injury participant 2 stated:

> I always have the fear of doing the same knee again, I guess like tearing it again. It's like anything I guess, you here the bad stories more then the good stories. It's like that with anything obviously, most people talk about the worst things then the good things. So, I have heard a lot about re-injuries, even with the other knee or with the same knee. So, I guess that's always been a fear...

Participant 2 also described her feelings of not knowing whether or not she will be able to return to her full potential:

> I always feared not being able to play the same and I still don't know right now. I think it will be fine now that I started practicing and stuff like that, but just the fear of not being able to do it like you could before, because I have never had to go through an injury like this...

Similarly, participant 3 described his concerns of re-injury in the following statement:

> ...that I would hurt it again or that I'm not going to be a hundred percent or I'll hurt the other leg or I'll have another injury, something like that. That's kind of scary cause I would never want to go through this again.

Participant 3 later added:

> I think cutting is going to be difficult or the spin move again, the thing that I got hurt with, just the actual physical strain it's going to put on my knee. It's going to be difficult for me to do that physically and then mentally the first time that I'm going to run into a defender or someone trying to stop me and me having to juke or do a spin move or something like that where I'm going to be like, "wow if I do this am I going to hurt myself again?"...

In discussing the psychological aspect of recovering from his injury, participant 1 stated:

> ...it's definitely been a strain mentally cause it's almost like another competitor, a person who's fighting for your job and then something like this happens and that person behind you is just...sneaking up on you it feels like, so I mean I guess that's mental.

All athletes began to incorporate sport specific skills into their rehabilitation and although they had some apprehension, they all experienced an increase in motivation.

When asked how it felt to be shooting around in the gym, participant 1 stated:

> It feels good and my shot is still there. I haven't been erratic with it at all so that gives me confidence. I just would like to play the team aspect so I can tell my mind that yea I can play, but my shot is not too bad right now.

Although participant 1 was happy to be shooting around he also expressed feeling tentative in using his legs equally:

> Legs get tired a little bit, sometimes my shot is short because I don't have enough leg in my shot. Sometimes it feels like I am jumping on my good leg a lot more then my right leg, so I try to compensate, reverse compensate for that. I mean it doesn't hurt, I'm just a little tentative that's all.

In discussing what it felt like to participate with her team at fifty percent, participant 2 explained:

> I'm able to hit without any problem, without it hurting one bit. Fielding, some of it I do some of it I don't. We'll do steals or something and since I play short I cover. I'll stand two steps from the bag and just take my little couple steps so I'm still working on my footing, getting to the bag but I'm not sprinting from my position. I'm definitely getting more active and it's still like gaining confidence in it to. Especially getting back out on the field with like cleats on and this brace I am trying to get used to, so.

Although she had some frustration with participating at a reduced capacity, she enjoyed being with her team again:

> I feel much better just being able to practice, instead of having to wait until I am full, fully active. The fact that they are letting me do what I can helps...it feels great to be out there and with my glove and everyone else around like the same team from last year.

When asked how it felt to incorporate lacrosse skills into his recovery, participant 3 stated:

> ...that's motivating. That means I'm getting somewhere. That means that I am working back to getting into practice and that makes me happy. That kind of gets me going a little bit, it's not just in the training room on the bike or in the training room on the balance board, things like that, things that I don't feel are getting me ready, ready to play. Where as actually taking some passes and running around with the stick in my hand that makes me feel like I am getting ready to go.

In explaining the confidence he felt in his knee while executing these drills, participant 3 stated:

> I feel confident but my body almost doesn't feel confident. When I'm doing my side to side thing, they want me to make sure I'm planting with my right foot and stopping on that and then pushing off to switch directions, and I know I have to do that but I had trouble telling my body to do that. My body wants to slow up on my left foot and then plant my right foot and kind of push off, it doesn't want to stop with my right foot, and I don't know why that is but I have a lot of trouble doing that. So, I'm confident in it but I feel like my body might just not be ready to do that kind of thing yet.

Dissimilar Themes Phase 2

The following is a discussion of the dissimilar themes that have emerged for each participant during the second phase.

Participant 1

He did not have much confidence in the physical therapists working with him because there was no personal connection, as he was skeptical of their true intentions.

When asked about his feelings toward the physical therapists that were working with him over the summer, participant 1 stated:

> ...they don't really check up on me, so I don't know whether I'm doing things right or if I'm doing too much or if I'm not doing enough. They don't really see how I am doing, there just like oh he's here ok good. I'll take his money. And it's expensive, we got a bill and it's like every little thing that they do they charge ten/ fifteen dollars. Rubbing my knee is fifteen dollars and hot/cold packs fifteen dollars, so it's kind of ridiculous what they do and you don't know whether they are doing it to help you or doing it to get money.

In discussing who exactly worked with him while rehabing at the physical therapy center, he made the following statement:

> It's not the owner or the head physical therapist. I think it's like a, almost like an assistant. I don't think he has a physical therapy degree, but he's qualified to do it. He knows the exercises and whatever, like she [head physical therapist] tells him what to do and he does it, so it's not like he exactly knows what's wrong with my knee. It's pretty much he knows what exercises to do for an ACL tear.

He explained further why he had such skeptical feelings toward the physical therapist:

> My insurance only pays for her [head physical therapist], on the bill she writes that she works with me but in reality it's just this guy, so. Part of the business, she doesn't have any clue on how my knee is doing. She'll see me, she'll occasionally ask me how the knee is doing or whatever but she doesn't know.

Although the toughest parts of his rehabilitation entailed being out of shape with his cardiovascular stamina and having a weak leg, his motivation to continue rehabilitation and make it a priority came from having little to do.

When asked what the toughest part of rehabilitation was, he commented:

> ...being out of shape, you can feel the atrophy of the leg, that it's not as strong as the other one. Sometimes my left leg is compensating for my weak right leg and I have to focus on my right leg that's hurt, just to keep it even and work a little harder. When I am doing agility stuff you can tell that my wind isn't there, I'm a little out of shape, so a...those are probably the toughest parts right now.

In discussing his motivation towards rehabilitation, participant 1 explained:

> Um, you see that's the thing I don't have a lot to do, so that's pretty much my priority. There isn't a lot to do. A lot of my friends aren't here this summer, they're working some place else. So, I don't mind doing it cause I don't have anything else to do. So, it is something to do I guess...as motivation. Something that I can do right now.

He felt nervous, anxious, and a sense of urgency to start playing basketball because he was concerned about how "rusty" and far behind he would be compared to his teammates.

Participant 1 began to question how prepared he would be for the upcoming season, as shown in the following statement:

> I feel good. A little hesitant. I don't feel totally confident about coming back and playing right a way just because I don't know what to expect. I don't know how bad my game will be, how rusty I will be. But I am confident that I will come back, I'm just not confident about how good I will be. If that will be a set back, so that is kind of...what worries me the most right now. If I am doing all this work but is it for nothing. I'll just go to practices and not be able to play because everyone else has been playing basketball all summer and I have just been working on my leg and not been working on my game, so I just hope I am not too far behind. That's my biggest worry.

He later added:

> Like I know my knee will be fine eventually. It just takes time but um, now that it is the middle of July and time is kind of running out for me to work on my game

> and to get ready for the season, so... part of not working and sitting around is knowing that everyone else is improving and I'm not. I have always been one to work on my game and try to get a little bit better. I just haven't been able to do that so it just kind of bugs me...makes me a little antsy a little nervous a little bit, but...I have always had that in the back of my mind.

Although he felt his support system primarily consisted of himself he did admit that his parents encouraged him, yet he still did not hear from teammates, and was frustrated and angry that his coaches did not call to check on how he was progressing.

In discussing who had supported him, participant 1 said, "Um...pretty much I would say myself, my dad and my parents have been pushing me to go to rehab and encouraging me a...stick with it cause I only have one year left...they have been encouraging me that way."

When asked if his teammates had been in touch with him while he was at home rehabilitating during the summer, participant 1 explained:

> ...on the computer, instant message, sometimes they will drop a line and they will ask how it is doing, so. I mean they don't go out of their way but...I think they ask out of curiosity instead of caring really.

Along with feeling isolated from teammates, participant 1 had a similar experience with his coaches' lack of contact:

> I don't think they are doing their job as a coach to contact me and as a human being just flat out...if I had a friend that had a bum knee I would be calling them or if I had, say I was a teacher and I had a student who was in my gym class, I would call them up and see how they are doing. I mean it's just courtesy, caring.

When asked if he felt his coaches' cared about him, participant 1 said:

> Not really, it seems like I am just another one who has had an injury, but I don't know whether...maybe you get prone to that type of thing when you are a coach, I don't know. Like prone to injuries, it happens all the time so it's not as climatic.

In discussing the type of support he wanted and expected from his coaches', participant 1 stated:

> ...they could of just given me a call, see how I am doing and ask and see if I needed any help with anything. Not that they would have been able to do anything but if I knew I could get a hold of my coaches and help me out, I would have a lot more respect for them...from me they would get a lot more respect. If they called too many times I would be like, yea I'm fine don't worry about it. But, an occasional phone call and... they don't know if I am coming back, if I'll be ready to play or not and I would think they would be worried about that, "are you going to be able to play?" And if not we better find someone else but it's like they don't even care.

The toughest parts about being injured entailed being in that in-between stage where he was ready to play but he could not, not knowing when he would be able to do what he wanted, and emotionally dealing with feeling useless.

Although less restricted physically he was still not one-hundred percent, which created new difficulties for him:

> ...being almost there, the urgency to play is real big and I am almost there. I only have hopefully a couple more weeks and I will be able to play, so it's just like waiting for Christmas, you just get antsy but you still have to take your time I guess. But I'm in that in-between stage where you are ready to play but you can't just yet. Someone had told you that you can soon but not yet. So, I guess that is the toughest part, again it's mental...it's not anything physical that is difficult.

When asked about the overall emotional, physical, and mental experience with his injury to date, he explained:

> There have definitely been times where I have thought about all three. I have had problems physically because I haven't been able to do what I wanted to do. Mentally not knowing when I'll be able to do what I want to do and emotionally a...feeling useless at times. I guess we have covered a lot of the aspects. I mean there isn't one thing that really sticks out it's just a... wanting to play because physically you have to be in great shape, mentally you got to stay focused and emotionally you can't really hold any grudges against anybody. You can't have bad emotions, you have to be positive about it.

His mind-set was starting to move towards not playing basketball (possibly a start in coaching) as he started to question whether or not he should just quit.

In describing how his mind-set had changed since sustaining his injury, he stated:

> ...I have been doing a lot of coaching this summer and, now I see myself more as a coach then a player sometimes. My mind-set is moving more towards not playing anymore but still finding a niche to be involved in basketball, so in a way that has an influence on my rehab, asking myself is worth it? Is it time for me just to quit? Then again, on the other side of that you only have one more year, I shouldn't quit. I'm in the middle of changing my thoughts from a basketball standpoint.

When asked if he had not been injured, would his mid-set still of changed, he replied:

> I don't think as soon, just because I'd still be working on playing basketball. Where as I have had all the time to think about what I want to be when I grow up and how quick that's going to come too. So, you got thoughts, maybe I should just focus on that instead of basketball...

He later discussed what his reaction would be if he was unable to play this upcoming season:

> I mean if it doesn't work out, if I miss the date and I'm way behind schedule a...I think I can accept hanging it up or whatever. But, that is definitely not what I want to do but I won't be devastated if I can't continue, but at least I gave it a shot.

Participant 2

Although her motivation was high for the first six weeks of rehabilitation, once she began to level off (i.e., stopped making regular gains) she found it to be repetitive, frustrating, and difficult to stay motivated.

In discussing her schedule for rehabilitation, starting at eight in the morning, and how that impacted her motivation, she stated:

> ...the eight o'clock definitely I think, believe it or not, motivated me, rather then going like at one and sleeping until ten or eleven a...and then having to go there and then your day, your afternoon is pretty much shot by the time you get back. Because I would go for two hours and I would get out about ten.

She added:

> ...yes I was tired sometimes but it just kind of woke me up getting there and getting going. I didn't have much of a choice, but that rarely happened. I pretty much got up and went and that started my day.

Although determined at first, her motivation declined after six weeks in rehabilitation when her schedule changed from three visits per week to two:

> ...believe it or not going less was kind of less of a motivator. As I started getting better and better I wanted to just kind of be out of there, just the feeling like I had been there all summer and... it got really repetitive after the first six. The first six is obviously a lot of progression, and then you start to see things leveling off... like doing the jog everyday and the stairmaster. It got very repetitive. Whereas the first six weeks it was adding something new all the time.

After surgery, her primary support came from her parents and physical therapists, but once back at school, her support shifted to her teammates and coach.

Participant 2 described her support system after her surgery when she stated:

> They weren't there over the summer (i.e., teammates and coach) so it took over to my parents and therapists...pretty much worked with the same therapist the whole time, but there was always other people in there and there's four or five therapists at a time. They were all with patients and it was just a happy positive environment. I don't think I could have gone through rehab like secluded and in a dark area with one person. I just think the whole environment and having other people there going through the same thing was a big support.

Now that she was back at school and practicing again, her support had shifted to her team when she said, "It's back over to the team and I'm practicing with the team and stuff like that, so...that's made it a lot better." When asked how it made her feel that her coach contacted her over the summer to see how she was progressing, she stated:

> Good, that she had enough time to keep in contact. She doesn't really talk to anybody over the summer too much. If you need to call you can call her but she doesn't keep in touch with the team or anything over the summer. So, that was good when she would call and ask or email and ask.

She felt her injury and rehabilitation experiences were extremely long but was happy with her progression, realized her situation could be worse, and felt she would never take softball and being healthy for granted again.

In discussing her injury and rehabilitation experience over the past five months, she summarized it in the following statement:

> Long, too long. Never had to go through being hurt, never sat a game my high school career, never had any sort of injury. Always had the ability to play every game, I always played every game all game. Um, definitely long. I've learned a lot a... about not taking playing softball for granted or being able to be healthy, things I don't take for granted anymore. I never used to worry about getting hurt in anything not just softball, walking down the street or going skiing or anything I was just fearless and something like this happens and it kind of hits you and slows you down a lot. Seeing people in rehab worse off. There was a guy in there who got in a snowmobile accident and he had like every broken thing in his body you could think of and he busted up both of his knees actually and he was doing ACL rehab for both of his knees. So just not taking things for granted, yes it was tough for me. I'm not saying it was easy but you just get educated about much more then just every day non-worrisome life that I had before.

When specifically asked about her progression and how she felt about her recovery, she replied:

> Very happy with it. I have known people to have more trouble then I coming back, then again I have known people to come back quicker. But, I think I can only be happy with what my body allows me. I can't push it, but then again I'm glad it's not been a very long slow process even when, I mean it has been but it, I think it could be a lot worse.

Not only did watching her teammates play in games continue to be extremely difficult for her (as she felt like she had been injured forever) but she also acknowledged that being this close to playing (but still not capable of it) as her most frustrating time.

Although she was participating with her team, she still found it very difficult to watch them play games when she said, "The hardest part has been just, we had a

tournament this past weekend and still watching is terrible, it's like man, it feels like it has been forever and I'm back for another season and I'm still watching." Participant 2 added further:

> In the spring it was hard to sit there and watch knowing that I was done for the whole season. Now, it's hard to sit there and watch knowing I was just practicing with these guys yesterday, like seventy-five percent. But, the little things I can't do, keep me from playing in the game, like sprinting and angels. So that is frustrating because I know I can do most of it but obviously the little important things I can't.

In discussing her feelings of playing in practice with her team but still being restricted from games, she said, "...when you're the closest I think that could be the most frustrating. Being this close to something but you can't do it yet, and going out and watching them play a game or something."

Participant 3

His short term goals were to increase his leg strength and improve his cardiovascular fitness in order to be 100% by the fall (his long term goal).

In describing what his goals were and what he needed to accomplish in order to continue moving forward with his recovery, participant 3 stated:

> I think the biggest thing right now is me getting my strength back. That's one of the biggest things I see. I can physically see my leg is a lot smaller then my left and my muscle tone in this leg is much weaker then this leg. So, I know muscle doesn't grow real quickly. I know that's going to be tough for me to get back to full strength...

Participant 3 also discussed how out of shape he was with his cardiovascular fitness:

> I'm really out of shape so I get real tired just running those fifteen yard patterns they just make me really tired I get out of breath and winded just from that...yea, that's really killing me. I've got to step it up on the stairmaster. I'm struggling...

When asked what his goal date was to be one-hundred percent, participant 3 replied, "I want to be a hundred percent by the fall. I don't think there is any reason why I shouldn't be able to be there".

While very happy with the medical care he had received, his support system consisted of parents, friends, teammates, and student athletic trainers.

In describing what his support had been like, participant 3 explained:

> He [student athletic trainer] has been big, real big. He's helped me. I have classes with him and he's always you know you got to get in the weight room, you got to do this, he's been a big help. My parents are real encouraging. My teammates are very encouraging. My roommates are supportive but they're my roommates and they're always there so it's a...I don't know if they are supportive because I got hurt or just supportive because they're my buddies. But they've obviously been helpful.

Overall, he was pleased with the progress he had made and the limited restrictions resulting from his injury, as he felt optimistic, upbeat, and much less focused on coping with his injury.

In discussing his physical progress, he stated:

> I don't think I could ask for anything more. Most people aren't running until at least three months and I'm already running. I have barely any restrictions at all and feel real strong. I know I'm not a hundred percent but I didn't think I'd be this far along to tell you the truth. I thought maybe I'd be getting into practice maybe at the end of three months and I feel I'm ready to start getting into some line drills some little passes here and there during practice, not actual contact but...I feel like I could get into practice and do some line drills and do some things like that and I never thought after two months I'd be there.

His confidence in a complete return to his sport was affected by his rapid physical recovery, as shown in the following statement:

> Well, since I have come so far so quickly and done so well compared to other rehabs, I guess you could say, I think that goes to show I'm going to get over it and soon it's going to be better. So, I'm highly confident that I'll be back, I'll be good to go. If I need to ware a brace I'll ware a brace and make sure that it's alright. So, I'm very confident that I'm going to overcome it.

When asked what he was doing to cope with his injury, participant 3 replied:

> I don't know if there is really anything I do to cope with my injury, like before it was just always there. It was always restricting me, and there was always things that I couldn't do because of it. Now, like I said I don't notice it as much so I don't really need to cope with it.

Being less challenged physically, his motivation decreased as he felt rehabilitation was repetitive, boring, and less of a priority.

In describing how his level of motivation to complete his rehabilitation had changed, he explained:

> I don't think it is as strong. Now I feel more comfortable with my knee. I'm able to run and I'm able…I'm less challenged physically. I can do a lot more stuff. So, I don't feel rehab is as important, it probably is just as important but if I have to prioritize things rehab might be two or three where as before it was one or two. If I have a paper due, before I'd say oh I can't do this paper, I need to go rehab. Now it's more like I got to get this paper banged out and I will rehab if I have time. I just felt rehab was way more important before then I do now.

In discussing what it felt like to continually report to the training room and complete his rehabilitation day-in and day-out, he stated:

> …by the end of it I was ready to get out of there. It's just …things got real easy for me and then they got boring and I was just like, "Oh man", it was almost like I dreaded going, I got to go to the training room again, I got to do the balance board…just yea very repetitive.

While not wanting sympathy, he did want others to realize the difficulties, frustrations, and the overall impact of the injury on his life (e.g., financial, physical, and personal).

When asked to describe his entire injury and rehabilitation experience to date, he explained:

> I would never wish it upon anyone. It's kind of a burden. It's just a very frustrating experience. It just straight up sucks. It's very frustrating in a lot of aspects. It's not just a sport injury, it's an everything injury. It just affects your

> entire life. It affects the way you sleep. It affects the way you get around. It affects your relationship with people. It affects your work. It affects your school. It affects a lot of things and I don't think I really realized or imagined that it was going to have this big of an impact on my life. I think it's really important to let people know that it's not that you're just out of your sport for a year, that's only at the base level, there's a lot of other things it's going to affect and there's a lot of other aspects of your life that it's going to affect and touch upon.

Participant 3 later said, "I mean I don't want sympathy, I don't want people to be like oh I'm so sorry but I do want people to realize that it's a difficult thing to go through."

His coach continued to keep him involved with the team in a coaching role (e.g., asking for his opinion, discussing team dynamics, and helping with practice) which allowed him to feel as much a part of the team as before his injury.

In explaining the type of contact he had with his teammates and coaches', he stated:

> Well, I go to practice pretty much everyday and I've traveled with the team now that we're having games. So, I see them all the time. They don't exclude me with anything even partying after the games, I'm right there with them. So, I feel just as big of apart of the team as I did before. Coach, he's really involved me as far as the team goes too. He's called me on the phone and asked me, "what's going on, what don't I see, why is our team flat sometimes, why are we excited sometimes, why are we playing well sometimes, and why are we not playing well." But, because I'm a peer and I'm their age I can see things that he can't... so he's really involved me in a coaching aspect.

When asked how it made him feel to have a coach that included him with the team even though he was injured, he replied:

> Well, I feel it means he respects me in some way. He could just leave me out and not let me get involved, but he gets me involved and asks how I feel about certain things so I think that shows a great deal of respect that he has for me, which makes me very happy.

Similar Themes Phase 3

Athletes concentrated on improving their leg strength, cardiovascular fitness, and explosive quickness.

In discussing what he was doing to increase his fitness level, participant 1 stated:

> I have been lifting three times a week. I'm lifting my legs and two days for upper body but legs three days a week. As far as agility goes, occasionally I'll go out and use the jump rope or do side to side jumps. But since we started to play I have been wanting to do that more than work on agility stuff. I figure that I can kind of work on that while I am playing.

In explaining her workout routine, participant 2 explained:

> We lift Monday – Wednesday – Friday a team lift. About an hour lift. As far as leg stuff goes its squats, leg press, leg curls calf raises and lunges…just the basics, I mean everyday exercises that anyone does. Agility's I do on Friday at three and then just biking and running on the treadmill.

When asked what she was concentrating on the most, she replied:

> I think just the muscle strength in my leg, definitely. Cause I started weight lifting and it helps me a lot with range or motion. I'm really concentrating on that. I can tell just looking at it that there's a little bit of difference. So I'm working at that the hardest and getting quick feet back, definitely.

Similarly, participant 3 stated:

> I lift everyday not necessarily my knee or my leg but I am in the weight room everyday. Probably I'd say about two times a week I'm lifting legs, trying to get my knee back or my leg back to where it was. I have been playing a lot of basketball lately which I guess is a good thing.

In discussing what he needed to work on the most, participant 3 explained:

> I think strength…the strength in the legs was so bad that I think I need to get that back a lot. I can physically tell, just see the difference between my one leg and the other. And I notice that I'm not as quick as I was before…but I think once I get my knee my leg strong enough that'll come back to me and then the agility things I'm sure will come back in time to, but probably the strength thing is the most significant thing right now.

Playing with their teammates created excitement and increased their confidence in using their knees.

In discussing what it felt like to finally begin playing basketball games with his teammates, participant 1 stated:

> Felt good, the first time was awesome, I hadn't played since February and it just kind of reminded me of why I play. I knew the first time that I played that I wanted to play, because it was fun and just good to be out doing what I like to do again. I played well the first time, not as well as I'd like. I was slow but made a few shots here and there so the confidence was pretty good. I think I have gotten a little better as each week goes on.

Participant 2 described her feelings of being apart of the team again when she explained:

> It feels great. I feel like I know what's going on within the team and what is coming up for us. I am more included now with goals and stuff like that. So, it feels great to be able to put my input in when last spring I could say what I wanted to but, I mean it didn't mean too much because I wasn't there all the time I didn't know what was going on. So, it feels great to just be part of the team again. Especially this team, we have a lot of expectations from our coaches and within ourselves and obviously the schools we always play. We have a big target on our back and I guess I'm happy to have that target on my back too again.

Participant 3 explained his experience with practicing with his team at the end of the season, when he stated:

> ...like right when I got into practice that's the same time they were getting into the playoffs and just the atmosphere was so exciting and everyone was ready to go. That's a tough time because it's finals time but that was probably the funnest part of my rehab, just getting back in at that time because it was just such an exciting time for the team and I was like wow, I'm playing with this team that is going to the final four. So, I think that helped me out as far as gaining confidence and that kind of thing, because after that I was like well, my knee is alright I can go and play basketball and can do this. So, I think that helped me out a lot.

In discussing how his teammates reacted to him playing again, participant 1 explained:

> Good. Um, playing wise I mean they expected me to be rusty and each time that I've played they've complimented me in saying "you know, that's not to bad for not playing in such awhile" or "you're getting better, or you played better then you did last time." They're constantly giving me positive feedback, nothing has been real negative. Um...it's been all positive, I can't think of any negatives.

Participant 2 described her teammates reaction to her returning when she stated:

> They've been good, I lost contact with them over the summer for the most part but everyone is busy. Um, came back in the fall and everyone is pretty impressed that I was practicing and a couple people came up to me and it was just great to them to see me in the infield.

Although Participant 3 was nervous about how his teammates would react to his practicing with the team, they embraced him with support and positive feelings:

> ...my teammates, I think I was real afraid of that, my teammates not kind of accepting me once I came back but they were all excited once I finally came back you know... "look who got a new helmet" and all that, just picking on me and very glad to see me back.

Although their overall injury experience had been difficult, the athletes learned more about themselves and the importance of their sport.

In discussing what he learned throughout the past seven months in dealing with his injury and rehabilitation, participant 1 stated:

> Knowing first hand what it feels like now for someone to have an injury, this was my first one pretty much. I guess it's been a test for me as an individual just sticking with it, sticking with the goal that I had from the beginning to play College ball and to continue until I was through. I mean...just a self test to see what I have on the inside of me. See if I have the heart.

Participant 1 later added:

> ...yea it's definitely a long process that I don't wish for anybody to have to go through. I guess the overall experience you're always just questioning yourself, "how am I doing, when am I going to get better, can I do this, when am I going to get back" I mean everything is a question, there are no certainties.

In describing what she learned from going through her injury, participant 2 stated:

> In essence it is making me work harder as far as like my body goes. I've always worked hard at softball but never necessarily in the greatest of shape, stuff like that, and I think now that I concentrate on it a lot more it will make me possibly even better.

Participant 2 also discussed how this injury experience will make her work harder in practice and games when she made the following statement:

> Um...well I could probably say this now, I don't know if I would say the same thing come March or whatever but if you're asking me now, um...I probably will practice and play like harder then I've ever played before.

When asked what he learned from this injury participant 3 explained:

> I've learned that it is not an easy thing to overcome. If anything it's a lot of hard work. I've injured myself before, I know we've talked about it, just little things here and there. A little broken bone or fracture, nothing to this scale and I've never really had to overcome anything, it's just I'm in a cast for a couple weeks and I'm out of it and I'm good to go. This, you have to actually work at it. If I didn't work hard at the beginning of my rehab then I wouldn't be where I am now...

After standing on the sidelines the entire season and helping his coach with the team, his perspective of playing the game changed, as seen in the following statement:

> One thing my coach and I have talked about is, we had this spare time during the middle of the season where we lost like three games in a row. and all the kids weren't that excited to play and everything. My coach was like, I don't know how to motivate these kids and I just mentioned to him that you don't realize how much something means to you until it's taken away and that could be for any aspect of your life but I never realized how much fun I was having playing and how much playing lacrosse meant to me until I couldn't play and there is no way that I am ever going to step out on the field again not being ready to play a game or not being excited for a game cause you know...that game could be my last game. I could re-tear my ACL and miss another season. So, you're not going to catch me being unmotivated to go out there and play a game even if I'm going to play two minutes.

Dissimilar Themes Phase 3

The following is a discussion of the dissimilar themes that have emerged for each participant during the third phase.

Participant 1

He was upset with the lack of personal attention he received from his physical therapist, was frustrated by the lack of communication and urgency by his surgeon, and continued to be very angry with his coaches' disregard for his injury, rehabilitation progress, and his role for the upcoming season.

In describing the environment at the physical therapy center over the summer and the lack of attention he received, participant 1 stated:

> I was pretty much on my own, lifting wise and the agility they helped me out with. But they were just pretty much pressing the stopwatch saying, "ok that's time," and they'd show me how to do it. It wasn't like a military situation where they were like "come on, do more" you know, which I would have liked it to be that way where they were pushing me. It was kind of a self motivation. The drills were self-motivated in a way.

Participant 1 later stated, "I could have received a lot more personal attention at the training facility at my home town then I did. I just have a bad taste in my mouth about them."

Not only was this athlete discouraged with the physical therapists, but continued to be frustrated by the lack of communication he received from his coach's since returning to school six weeks ago:

> ...they really haven't called me or anything, but I think that's just the way they are because they don't give anybody else phone calls. So you pretty much have to stop in and see what's going on and they relay their messages through the captains. Every time I see them they say "how is the knee?" but...I mean it's just...the season is coming and you'd think that they would want to get their team together and have something in their mind, where they say, "ok this guy's going to be at this position," even before they have tryouts they pretty much know who is going to be on the team. It just doesn't sound like...one that they're worried about me not coming back like they think I'm fine, or it could be they're not going to worry about me because they don't think I am going to play, so I don't know how to read it.

Participant 1 later added:

> ...obviously if I can't perform to what they expect from their players I shouldn't play but I don't know. There's a definite lack of communication on where I stand as an injured athlete trying to come back. So, you think about it, you want them to tell you up front, if they don't see me in the picture just let me know and I can make my own decision but I if they're going to yank my chain around, I'll get pissed.

When asked if he expected his coach's to make some type of communication with him when he returned to school, he said, "Yes and no. I didn't expect it because he hasn't been doing it but again I was like "oh maybe...I would think they'd call me." You still

expect it cause that's the way you want to be treated." In discussing his feelings toward the surgeon about allowing him to progress during the summer he said, "I was limited by the doctor in Ithaca because he didn't really release me to do agility stuff until mid July, so I was frustrated then and I'm frustrated now."

Although his father and peers had encouraged him, his support system primarily consisted of himself, as he generally felt unsupported by others during his injury experience.

In discussing his support system and for this athlete lack of support was an underlying issue, he stated:

> I guess the biggest thing is just my personal beliefs as my support system. As far as people, my dad has encouraged me, peers and friends and other players a...nothing but positive encouragement. As far a like a goal I mean it's just my foundation my motivation that I think has made me go through the whole process.

Thinking back about his entire injury experience and the type of support he received in the beginning as compared to the end, he explained:

> ...the support was real good when I first had my surgery because surgery is surgery, no one wants to do that. But once you get into rehab everyone's like yea I've done that, so your support and the pats on the back get fewer and far between.

He was frustrated because he was not 100%, realizing that he should have done more rehabilitation over the summer, and because he thought he would be working solely on his basketball skills instead of still focusing on rehabilitating his leg.

In discussing where his knee was at this point in his recovery he stated:

> I have had two strength tests here at the College, and the first one that I took, my bad leg or my surgery leg was forty-five percent weaker then my good leg. And they said that I probably shouldn't play on it yet, and then I got re-tested two weeks later which was last Tuesday....and it had only gone down to about forty percent.

In the realization that his leg strength was significantly behind schedule, he described his motivation over the summer to accomplish his rehabilitation:

> I thought my motivation was good. I went twice a week with them [physical therapists at home] and worked on strength and agility stuff. But when I got here I realized that my leg wasn't as strong as it should be and that I was kind of behind. It's going on six months now and I'm not a hundred percent yet. So, I thought I was good at the time but now that I look back on it, I wish I had done a little bit more. Maybe a little bit more cardio and I wish they had pushed me a little bit more, or allowed me to push myself.

When asked where he thought he would be at this stage compared to where he actually was, he stated:

> I thought I'd be a hundred percent definitely, working on my game and that way I would be almost ready to perform at one hundred percent when the season starts. As opposed to still working on my leg and trying to do both at the same time.

The toughest challenge at this phase was being "almost" done (but not quite), finding the motivation to continue with rehabilitation, feeling doubtful about future playing possibilities, and feeling jealous of healthy teammates.

> In describing the toughest aspect of his injury, participant 1 explained:
>
> ...now the toughest thing is that I am almost there but not quite. As far as strength goes maybe motivation as far as lifting three times a week. Sometimes I don't feel like lifting three times a week or after I play. I don't feel like lifting but I know I should do it. I think that's the toughest part now, just mentally doing it.

Participant 1 also explained his fear of not being ready in time for the season because of how far behind he was:

> I guess just not being ready in time, that's the biggest fear. Not being a hundred percent by the season which I pretty much know now that I won't be. So not being ready and then knowing what that will lead to. I'm always going to have to catch up I guess is the biggest fear. I'm always going to be behind.

When asked to describe how he felt at this point in his rehabilitation, he said:

> I'm still anxious to be a hundred percent. I have a little bit of doubt just because of the lack of communication and not being ready yet. So, I'm anxious to get

> better yet I'm doubtful about the situation because I'm behind. It's hard to express feelings because there are so many little things that happened. I guess there is a little bit of jealousy, just because "why did this happen to me?" I've worked so hard to a get where I am and then this happens with one year to go..."why doesn't this happen to everybody?" I wish I could play like they do or I wish I could of worked on things this summer so that I could be as good as they are. I guess that's jealousy.

Participant 2

While extremely eager to return to softball, she struggled with being patient and working through the anticipation and extreme emotions surrounding her first game.

When asked to describe the most difficult aspect of her injury situation at this stage, she explained:

> ...the hardest thing for me right now is feeling the way I feel, which is good, and just waiting. I just wish I could practice, I wish we could practice as a team because I can only do so much on my own. It's been awhile for me, it's been since last March.

In describing her most dominant emotion at this stage, she stated:

> A...for me personally probably just eagerness. It's not about being able to do certain drills. I just want to play. I practiced all last January, February and we were just starting games and that's all I looked forward to in those two months, and I'm still looking forward, I haven't got the chance yet. I'm kind of over feeling bad that I wasn't there last year and stuff, that's moved on, obviously I can't carry that. I'm just eager to get started. I'm doing stuff now but I want to do more.

When asked to discuss what she thinks it will feel like to step back out on the field and play again, participant 2 replied:

> I don't know if I can even put it into words. I've day dreamed about it but I could not put it into words. Probably the most excited I will ever be in my life, as of right now at least. So, every good word you could think of. I'm sorry I just can't really put it into words. I'll be shaking...it almost brings tears thinking about it, just huge basically. It means a lot.

Knowing first hand the experiences associated with a serious injury, her biggest fear was getting hurt again.

In discussing her concerns about returning to play, participant 2 explained her fear of re-injury:

> Getting hurt again definitely, now that I know what it's like. Before I was like it couldn't happen or I'd come back, it wouldn't be a problem. Just seeing how long the process is, I've said that if I, knock on wood, tear my knee again, that I wouldn't come back because it would be so hard. But...I don't know whether that is true. I'm not going to dwell on it but if someone asks me, yea that is a big concern to me.

She later reiterated this feeling when she said, "That's my biggest fear pretty much, just getting hurt again."

She felt her experiences with the sports medicine team (i.e., physical therapists, athletic trainers, doctors, and surgeon) were wonderful because they all took great care of her and explained every little detail regarding her injury, surgery, and rehabilitation.

In discussing the experiences she had with the professionals working with her throughout her injury and rehabilitation, participant 2 stated:

> The best experience was at home with the physical therapists all summer. I'd never gone to physical therapy before and didn't know what to expect. I'd never been to physical therapy before and it was just a happier environment then I thought it was going to be, because of the people I worked with. Plus, the people around me going through the same thing. The reassurance that I wasn't the only one and they were really great about it, we didn't always have to talk about the knee, we talked about everything when I was there.

She later talked about the athletic trainer's, surgeon, and school physician in the following statement:

> The student trainer was in Florida when I got hurt and she helped me a lot during the last few days down there. Pretty much anything I needed she took care of. Trainers back here (i.e., school) have also been good. They put me on a program, answered any questions. Along with the doctors...Surgeon was great informed me of everything that was going to happen before, after, and during surgery. Basically kept in touch and answered all my questions before I had a chance to ask.

Participant 3

His focus shifted from getting his knee better to preparing for the season, as he was very happy that his injury situation was over and he could again concentrate solely on lacrosse.

In describing how his motivation, focus, and perception had shifted from rehabilitating his knee to getting ready for the season, he stated:

> I don't feel as motivated as I was before. It's almost as if those things are tough to get motivated for. I don't have a problem getting myself to the gym and working out and I want to go and play basketball but it's not as though I'm motivating myself to go because I need to get my knee better. It's just motivating myself to go because I want to go and play basketball and have a good time and all that. So it's kind of moved past that "I need to get my knee better." It's something I have to do but it's almost, like I don't, before I was like I got to go, I got to get to the gym, I got to get my knee better and now I've kind of gotten past that. I'm motivated to get to the gym and go and play basketball but it's more of a thing where I just want to go do that instead of I have to do that.

Participant 3 later added:

> I mean it's like the same thing last summer when I was getting myself in the gym and doing all that when I wasn't injured. It's just something that I have to do for this season. I know I've got to get my knee stronger and all that but that's…I don't know how to explain this but it's more like I've just moved past that…that point where like urgency where I need to get my knee better. I know my knee is going to be alright now and I'm getting the brace and I'm going to be able to do what I need to. The doctor says everything is fine and the chances of me doing it again are going to be slim and none especially once I have the brace on. So, I'm almost past the point of where I need to get my knee better, I know it's better, I know that if I just keep working on the things I'm working on now that I'm going to be fine for the next year.

In describing how it felt to basically be done with his rehabilitation and able to focus on lacrosse 100%, he stated:

> I'm just so happy that it's over with, when this first happened some people were saying, it's going to take you three months to get back and then the doctor's like well it's going to take you six months to get back, and I'm thinking to myself if it's going to take me six months before I'm ready to go, that's going to be right at the beginning of August. That is going to be tryouts almost and I'm not going to

> have been able to play lacrosse. I'm going to be real rusty. So, I'm excited at the fact that here it is the middle of June and I still got two months to get myself ready for the season, that makes me real happy because I have this window where I don't have to worry about my knee. I can just get myself ready for the season.

He felt his support system had been great and that everyone (i.e., his surgeon, physician, athletic trainers, parents, friends, teammates, and coach) were always willing to help him.

Participant 3 perceived his support system to be very positive when he made the following statement:

> I think I had a real good support system. The trainers helped out a lot. Dr. (name) was always around to answer questions. Dr. (name) was only a phone call away. My parents were a big help...my support system was really good. I was pretty happy with the way it turned out.

He specifically talked about the support he received from his head coach, when he stated:

> I just got a letter from him the other day just saying how he was thankful for my support of the team this year and that he is looking forward to me getting better and being apart of the team next year, so that's real motivating. That's something that's going to go up on the wall and when I don't feel like going to the gym. I got to take a look at that and get myself better, so that's real helpful, especially over the summer.

He was concerned that he had lost a step, would not play to his potential, and that he would again have to prove himself to his coach.

Although participant 3 recovered extremely well he had certain concerns about returning to play, as he stated:

> Just the fact that...if I lost a step at all, you know what I mean? I know it's a figure of speech but I haven't played lacrosse in close to six – seven months, I don't know where I'm going to be as far as where I was when I got hurt. I don't know if I lost some stick skills or any of that, so I definitely think I need to get playing lacrosse over the summer so I can judge myself.

Participant 3 had also put pressure on himself in regards to proving himself to his coach again when he said, "I mean coach hasn't seen me, by the time we have tryouts he's not

going to have seen me for ten months, so I know I have to prove to him that I can still play."

Now that his recovery was complete, he would advise others who are in a similar circumstance to stay positive, to not dwell on the injury, and to make the best of it.

Now that his injury situation was behind him and was able to reflect on his experience, he would advise others who are going through a similar injury the following:

> ...I would just say the biggest thing is to stay positive. I mean...if you go into it thinking that you're screwed and you got to wait six months and it's never going to get better and blah...blah. If you go into it negative it's probably going to be the worst time of your life. I tried to stay as positive as possible and do what they were asking of me and even though I wasn't going to be able to play I still went to the practices, still sat on the sidelines, still helped guys out, still cheered the team on. And that's the biggest thing that I would say. If I was to give anyone one piece of advice, just to stay positive and don't let it get the best of you. If you can't play you might as well help coach. If you can't work then you might as well do your homework. There is no point in dwelling on it, it happens, you're going to get better, just make the best of it.

Summary

The results focused on the similar and dissimilar themes associated with the athletes' first, second, and third injury phases. This study identified a wide range of thoughts, feelings, and experiences associated with season-ending injury. The participants' uniqueness was highlighted by only 9 similar themes and 38 dissimilar themes. This, despite all three participants having suffered the same injury.

The similar experiences during phase 1 included concerns related to their injury and return to their sport, physical restrictions, and the realization that rehabilitation would be difficult. Phase 2 similar themes included a continued concern for their eventual return to play and an increased motivation as a result of sport specific skills being introduced

into their rehabilitation. Finally, phase 3 similar themes included an increased excitement while practicing with teammates and working hard on physical conditioning.

The unique (i.e., dissimilar) responses to season-ending injury were associated with the athletes perceived views of their support system, motivation, and how their bodies physically recovered from their surgeries. Each athlete expressed different experiences, contributing to 38 dissimilar themes identified across the three phases.

Chapter 5

DISCUSSION

This study explored the following research question: (a) What do Division III collegiate student-athletes experience following a season-ending injury? This chapter provides a summary of the similar and dissimilar athlete experiences. Conclusions are drawn and discussed in relation to the outlined research question, the current body of literature, and the overall injury experiences.

The three participants in this research study included a male basketball player in his junior year, a female softball player in her freshman year, and a male lacrosse player in his junior year. As stated previously, all three subjects suffered the same ACL (anterior cruciate ligament) injury. In order to understand the psychological experiences of these three athletes, one must understand the "physical" process that follows most ACL tears. First, when these athletes were diagnosed with an ACL tear there was a period of time in which they engaged in pre-surgery rehabilitation in order to increase range of motion, increase strength, and decrease the swelling in the knee. Once this had been accomplished, the athletes had surgery to repair their ACL. Immediately (i.e., two to four days) after surgery the athletes began rehabilitation. Depending on the athlete, rehabilitation ranged from four to nine months with an average rehab time of six months.

Principal Findings

Three (n=3) injured athletes were interviewed two weeks after their injury was diagnosed as season-ending (phase 1), after completing half of their projected rehabilitation (phase 2), and two weeks prior to the projected completion date of

rehabilitation (phase 3). In addition, each athlete's head athletic trainer was interviewed at the projected midpoint of the rehabilitation.

The similar experiences that emerged for each of the outlined phases resulted from across subject comparisons of each athlete's higher-order themes in the first, second, and third phase. Nine similar experiences emerged across the three phases. Phase 1 included four similar themes, phase 2 included two similar themes, and phase 3 included three similar themes. There also emerged several dissimilar themes that will be discussed later in this chapter.

Phase 1

1. Although ready for the challenge, confident, and motivated, the athletes realized that rehabilitation would be painful, demanding, and difficult.

2. Injury affected the athlete's day-to-day lives (e.g., they needed extra time to get to classes, they were unable to participate in desired activities, and some could not even drive a car).

3. The athletes' support systems primarily consisted of friends and family.

4. Significant concerns were expressed as they began to process the magnitude of their injuries.

Phase 2

1. Dealing with and mentally overcoming their injuries (i.e., fear of re-injury, not being able to play to their full potentials, and trusting their knees) was very difficult.

2. All athletes began to incorporate sport specific skills into their rehabilitation and although they had some apprehension, they all experienced an increase in motivation.

Phase 3

1. Athletes concentrated on improving their leg strength, cardiovascular fitness, and explosive quickness.

2. Playing with their teammates created excitement and increased their confidence in using their knees.

3. Although their overall injury experience had been difficult, the athletes learned more about themselves and the importance of their sport.

Conclusions and Interpretations of Similar Themes

In relation to the aforementioned findings, the following conclusions were drawn. Interpretations of each conclusion, as related to existing literature, are provided. The conclusions support the athletes experiencing similar thoughts and feelings throughout some or all of the outlined injury phases.

Throughout the first two phases, athletes were fearful of re-injury or having the same injury take place with their other knee.

In his discussion of athletic injury, Heil (1993) speculated that fear of re-injury is always present for the injured athlete. Shelley (1998) supported this when he found all four of the athletes in his study to be fearful of re-injury (i.e., across the no-participation, limited-participant, and return-to-play phases). Similarly, Samples (1987) explained that fear of re-injury was a common reaction from injured athletes. But results from this study found that although all three athletes were fearful during phase one and two, only one athlete (participant 2) continued to feel this way during phase three. For example, during phase 3 when participant 1 was asked if he was concerned about re-injury, he stated:

> No, not now. I mean I'm wearing a brace and mentally that's kind of ...gives me a little security. I haven't really thought about that. Again, it comes with the

> territory and in my mind what's going to happen is going to happen. I want to play so that's not going to stop me.

Similarly, participant 3 stated:

> ...I don't feel any pain or any hesitation. I think that as far as playing lacrosse or anything like re-hurting my knee, it's going to be alright. I guess there is a chance that I could land funny and twist it or something like that but...I haven't been hesitant at all when I'm playing or anything like that. I know re-injury is a big, a big thing before but I don't really think about that anymore.

However, for participant 2 fear of re-injury was still a significant concern during phase 3 as depicted in this passage:

> Getting hurt again, definitely. Now that I know what it's like, before I was like it couldn't happen or I'd come back, it wouldn't be a problem. Just seeing how long the process is I've said if I, you know knock on wood, tear my knee again, that I wouldn't come back because it would be so hard.

It is unclear as to why participant 2 held onto her fear of re-injury and the other two participants did not. Physically she was ahead of participant 1 but behind participant 3 in terms of her recovery time. It is possible that this relates to gender differences whereby men and women respond differently. However, this is only speculation as gender differences were not the focus of this study.

Although participants 1 and 3 were not fearful of re-injury specifically during phase 3, they did have fears related to other aspects of their injury. Petipas and Danish (1995) outlined injured athletes' anxieties and fears as stemming from the loss of a daily practice routine and a normal schedule outside of sport, the ongoing pain and discomforts associated with the injury, and the uncertainty about making a complete return. Similarly, Heil (1993) and Petipas and Danish (1995), explained fear of re-injury may also show itself as a sense of caution and doubt concerning the future.

Participant 3 did worry about that first hit he would encounter as well as executing the same "spin move" that led to his injury. There also existed some hesitation and anxiety about again having to prove his abilities to his coach as he stated, "Coach hasn't really seen me, by the time we have tryouts he's not going to have seen me for ten months, so I have got to prove to him that I can still play."

His fear during phase 1 and 2 shifted from solely focusing on his knee (i.e., re-injury) to a broader picture of what it might be like to play. As his mind-set began to change from rehabilitating his knee to preparing for the upcoming season, his fears shifted from a fear of re-injury to an increased fear of sport participation.

For participant 1, his fear transcended a bit differently. During the first and second phases, his fear related to re-injury and not playing to his full potential. Once it became obvious that he was behind schedule with his rehabilitation, his fear turned to whether or not he would be ready to play again or even be part of his team. He stated:

> I guess just not being ready in time, I guess that's my biggest fear, not being a hundred percent by the season which I pretty much know now that I won't be but a...so not being ready and then knowing what that will lead to.

Although he was worried about not being one-hundred percent for the season, the underlying issue for this athlete was his future membership with his team. Once the reality of his physical status began to sink in, he realized his opportunity to contribute to the team, even in a diminished capacity, was in jeopardy. Because he understood his physical limitations, his fears shifted as his uncertainty about his basketball future began to grow.

Although fear of re-injury was not part of the lived experience for participants 1 and 3 during phase 3, there did exist other fears that influenced their feelings and

perceptions. Fear of the "unknown" (i.e., uncertainty) was a significant factor as these athletes had never been through a season-ending injury. It seems natural that athletes might question various physical, mental, and emotional concerns as they work through their injury, rehabilitation, and begin to make a complete return to their sports.

The athletes' motivations were high after surgery, decreased during the mid point of their rehabilitation, and then increased again as they began to incorporate sport specific activities into their recovery.

According to Gould et al. (1997a) athletes often discuss the difficulties they have with "being patient" during rehabilitation. Bianco et al. (1999) explained that a strong belief that one will recover and maintaining a positive perspective were essential to staying motivated and coping with the frustration and disappointment of slowed progress and rehabilitation setbacks.

Interestingly though, all three participants were very motivated right after surgery and it was not until the sixth or seventh week into their recovery that their motivation started to decline. Participant 3 described his motivation when he first started rehabilitation:

> I think the first couple weeks was when I was the most motivated. I was trying to get as much done in there, when I was in the training room as possible. Emotionally I was very motivated. I wanted to see improvement.

Similarly, participant 2 described her motivation right after surgery in the following statement, "Definitely motivated right after surgery. I couldn't give you a period of time but right after surgery I was pretty motivated to just get back."

It became apparent that all three participants were extremely eager and motivated (after surgery) to get the process of rehabilitation started. These athletes had waited long

enough (i.e., in their minds) to have their surgery, and therefore were willing to put forth the required effort that was needed at the beginning of rehabilitation. This finding seems very important in that as the athletes were most restricted and experienced the majority of their physical pain, their motivation was highest.

This was likely attributed to the substantial daily gains (i.e., increased range of motion) that each athlete experienced following surgery. As their hard work was rewarded with physical improvement, their motivation stayed strong. However, once the daily gains began to slow and the athletes were seeing only weekly gains, their motivation was challenged.

According to Grove and Gordon (1992) the question of motivation during rehabilitation becomes particularly critical during inevitable setbacks and periods of little or no improvement, which will challenge the athlete's motivation and enthusiasm for treatment. Results indicated that participants 2 and 3 became frustrated with their recovery during phase 2 when their exercises became repetitive and boring. In regards to the monotony of this rehabilitation, athletic trainer 1 stated:

> When you are talking to people about this before hand (i.e., before surgery) you have got to let them know this is a long process. It is a hard mental process and it is physical. You can only do quad sets and straight leg raises so long before you go bananas.

This athletic trainer also talked about the time commitment needed during this rehabilitation when he said, "It's a rehab that really needs attention almost seven days a week, so you try to educate them so that on the weekends they are doing some things."

Participant 1 felt his motivation was fine during phase 2, until he returned to school and found himself behind schedule and realized he should have done more over the summer (i.e., phase 2). He stated the following during the phase 3 interview, "I think

I should've pushed myself more this summer then I did. Maybe a little more running. Definitely agility stuff that relates a little more to basketball and playing."

Participant 1 added later:

> I thought that I was on track and I had enough time so there was no reason to really push it, you know so. I guess that was my logic. I definitely should have done more, more agility, more...maybe lifting more days or lifting more weight...

Although participant 1 was motivated to complete his rehabilitation twice a week at a physical therapy center, he was not motivated to complete additional work on his own.

At the midpoint of his rehabilitation, participant 3 began to experience frustration with the repetitiveness of his exercises. He wrote in his journal:

> Things in the training room seem to be pretty repetitive so I am feeling somewhat bored. My knee feels good and the exercises do not seem to be very challenging. I am looking forward to getting out of the training room and doing some things that are more difficult and related to lacrosse skills.

Participant 3 went on to explain his motivation for that week when he wrote, "I feel my motivation has diminished this week a little. I think this is due to the lower level of demand I am putting on myself and my knee."

Similarly, participant 2 talked about her motivation declining at the midpoint of her rehabilitation. She stated:

> ...it just started dragging on. Especially...it was kind of weird cause even though I was going less [to rehab] it was like...you just didn't want to go when it came around. Like it was just routine for me to go Monday – Wednesday – Friday and like I said I was doing different things all the time and then it started getting repetitive and kind of frustrating. You just wanted to be done.

It became apparent that due to the length of rehabilitation, the athlete's ability to put forth 100% (for the long-term) was difficult. When progress was slow and the long-term goal of returning to play was still distant, accomplishing daily goals became that

much more difficult. Fortunately for these athletes, when they began including sport specific skills into their rehabilitation, their motivation and confidence increased significantly. For example, participant 1 stated:

> I've been shooting around by myself a little bit but I just jumped into five-on-five. I mean...I have been passive when I've played so far and just gradually started to get into the mix of things where my confidence feels good.

Similarly, participant 2 stated:

> I have a lot of drive right now just...being able to get a taste of being back makes you want to come back. If I was sitting at home and not able to be out there and watching practice I'd probably have less drive. But being able to participant, everyday I want to do more and more.

Along those same lines, participant 3 wrote in his journal:

> This week I started doing my rehab drills at practice and moved out of the training room. I am glad that I have moved out onto more challenging activities. It increases my motivation and helps me stay on task. I am able to measure my progress better while doing these exercises too because I am put in real situations.

In summary, it appears that if an athlete is going to have a decline in their motivation, it will likely take place during the midpoint of their rehabilitation, when things become repetitive and progress slows. With a greater understanding of these motivational changes, the sport medicine team can be better prepared to impact the athlete's motivation and thus give the athlete the best possible rehabilitation experience.

During phase 3 the athletes were able to reflect on their experiences and discuss specific lessons they had learned from their season-ending injury.

According to Bianco et al. (1999), despite the difficulties associated with recovery from injury and illness, many athletes find there is much to be gained from their injury experiences. One athlete from the Bianco et al. (1999) study stated:

> There are a lot of lessons you can learn. You learn a lot about yourself and how you deal with a critical period that you would not necessarily have expected to

> happen. You learn about your character and how strong you are and how willing you are to work hard to regain the physical stamina that you had before. Although being injured is not a lot of fun, you definitely learn from it (p. 165-166).

Similarly, results from Udry et al. (1997) showed that over the long term individuals felt they positively grew from their injury experience. In fact, 95% of the athletes reported something positive following their injury experience. One athlete talked about her increased commitment to training when she stated:

> The grass is always greener on the other side...When there is something that you can't have and that you want so badly, you start to work for it...When you are totally healthy and things are going great, you just can't work that hard. You have to really need and want something badly (p. 243).

Results from this study were similar. In discussing how his experiences had changed the way he would interact with an injured teammate, participant 1 said, "If I could help them out anyway I definitely would, cause you definitely need the help when you're injured."

Participant 2 felt she would never again take softball for granted, when she stated:

> I think when I come back I'm not going to take anything for granted. I don't want to say I took it for granted (playing softball), it was the greatest thing in the world, but it kind of puts you back in your place (having an injury) as far as the athletic stand point goes.

Similarly, participant 3 explained:

> ...you don't realize how much something means to you until it's taken away and that could be for any aspect of your life but, I never realized how much fun I was having playing and how much playing lacrosse meant to me until I couldn't play, and there is no way that I am ever going to step out on the field again not being ready to play a game or not being excited for a game cause that game could be my last game. I could re-tear my ACL and miss another season, so...you're not going to catch me being unmotivated to go out there and play a game even if I'm going to play two minutes...

There is no denying that the athletes were challenged physically, mentally, and emotionally throughout their season-ending injury, but they found a way to accept their

injury status and learn from it. Petipas, Brewer, and Van Raalte (1996) argued that the goal of any intervention program with student-athletes in transition (i.e., from athlete to injured-athlete) "should be to enhance their ability to not only cope with transitions, but also to grow through the experience" (p. 150). Results from this study indicated that there were opportunities for personal growth surrounding a "negative experience" such as a season-ending injury. It seems as though there may be some "positives" in the midst of the generally negative experiences associated with athletic injury.

Many athletes may develop a stronger desire to play then previously felt (i.e., before their injury). In other words, athletes may see their playing a sport as a privilege rather than a right. The athletes in this study experienced what it was like to have something they loved taken away. As a result, the sport counselors can likely help the injured athlete transfer these lessons learned to areas both in and out of sport.

Conclusions and Interpretations of Dissimilar Themes

More dissimilar than similar experiences emerged throughout all phases, despite all three subjects suffering the same injury. However, the underlying factors that impacted each athlete's reaction to his or her injury and rehabilitation situation were apparent. The responses and lived experiences were compounded by three core elements (see Figure 9):

1. The strength or lack of support that the athletes perceived.

2. How their bodies physically reacted to and recovered from surgery.

3. Their internal desire (i.e., determination) and ability to maintain a strong motivation over a long rehabilitation.

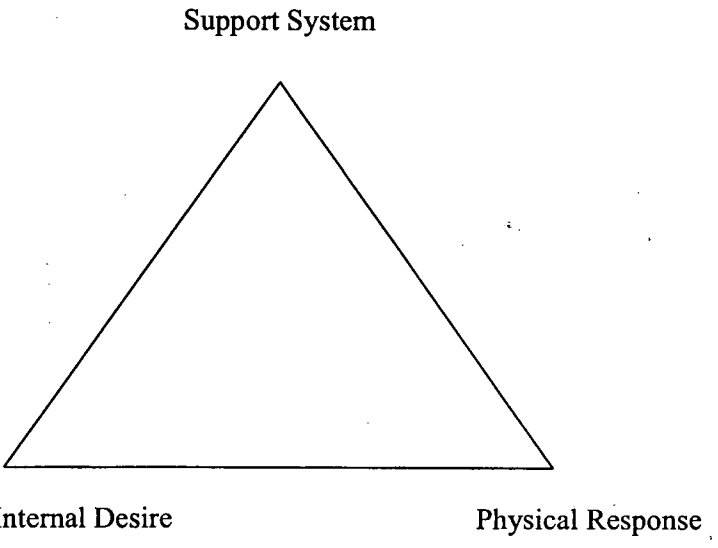

Figure 9. Vogan's Biopsychosocial view of injury rehabilitation.

Each individual had different experiences concerning these three factors, resulting in three different perspectives. A combination of these elements, positive or negative, will likely have a considerable impact on an athlete's season-ending injury experience and return to play. The following is a discussion of the different experiences that the three participants had with these core elements.

The athletes support system (i.e., positive or negative) had a significant impact on their injury and rehabilitation experiences.

According to many authors, social support is critical in the rehabilitation process especially with moderate and severe injuries (Silva & Hardy, 1991; Williams, Rotella, & Heyman, 1998). Hardy, Burke, and Crace (1999) stated that, because injury can adversely affect numerous life roles, a broad range of support needs will most likely need to be provided for effective healing to occur. How a support system responds to an athlete can directly affect the athlete's response to injury (Ievleva & Orlick, 1999). Results from the current study support the previous statements in that every athlete expressed positive and/or negative feelings concerning their support system. Given the recovery time from season-ending injury, it seems obvious that social support (i.e., family, friends, teammates, coaches, athletic trainers, physical therapists, etc.) will have a considerable influence on the injured athlete.

For example, participant 1 felt unsupported (i.e., by his coaches) from the onset of his injury. During the phase 1 interview, he explained how his coaches had not contacted him or made any effort to see how he was progressing. He stated:

> No, not as far as phone calls, but if I see them in the halls or whatever they will ask but, it's kind a...I expected more to be honest with you. I expected maybe a phone call here or there saying "how are you doing?", "what does it look like

> when you are getting surgery?", that type of thing but I mean, it just seems like I am really way on the back backburner.

In summarizing how the lack of contact from his coaches affected him in dealing with his injury during phase 2, the same participant explained:

> Um, it's more of a business, so I think the knee is kind of like, you're kind of like damaged goods. You're on the back burner, you're not a priority. So that's just, I mean that's another part of the frustration that comes along with the injury.

During his Phase 3 interview, participant 1 expressed what he wanted (i.e., expected) from his coaches, when he stated:

> ...lunch would be cool, or any type of get together to say, "how are you doing, what can I do to get you ready for the season?, could I set up something with the trainers, or come up to the gym and we can run sprints and I'll help you with your shot" or something like that, you know just...someone there that you know they're going to help you. That is what I have wanted all along.

Results from Shelley (1998) showed similar reactions from the four participants in his study. For example, during both the no-participation and limited participation injury phases, athletes felt isolated from, ignored, abandoned, misunderstood, and/or unsupported by teammates and coaches.

According to Hardy et al. (1999) coaches can be helpful by providing emotional and informational support during injury recovery. These authors also state that coaches can serve an important social support function by encouraging the injured athlete to stay involved in team activities and team meetings. Wiese-Bjornstal and Smith (1999) explained that coaches should strive to provide evidence that they care about their injured athletes by recognizing and supporting the athletes' rehabilitation progress, regardless if the injury is short-term or season-ending.

Participant 3 had a positive coach support system throughout his entire injury and rehabilitation. In discussing his reactions to his coach including him with the team, he replied:

> I guess he [coach] could be just like... sit on the sidelines with the trainers and do your thing, but he tries to include me which I think is a good thing especially within the team. You always want everyone to be involved and you don't want anyone to feel like they're not part of the team. So, even when I am not playing he's still trying to make me apart of the team which I think is a good thing.

Similarly, participant 2 talked about the support and encouragement she received from her coach when she stated:

> She told me that when I got hurt that she still wasn't bringing anyone else in. Like before surgery and before she even knew how anything was going to go, she wasn't recruiting anybody, which was taking a huge chance on me, and the position, and the team and everything...that meant a lot then and I kind of just reminded myself of it.

Participant 2 later added:

> ...she [the coach] is the first to ask me how I am doing when I walk into practice but you know, I pretty much go in their and chill with her and let her know what is going on and stuff like that.

Given the length of rehabilitation, there is ample opportunity for a coach to step in and make a connection with an injured athlete. Yet, if the coach does not, as seen with participant 1, resentment, anger, and frustration may result. According to Shelley (1998) in the worst cases, the coach may pay less attention to the injured athlete because he or she is no longer useful to the team. The previous statement is supported by participant 1 when he said, "It feels like they [the coach] just shoved you aside and wait until you rehab and [can] show them something different."

Although participant 1 was confused and angry by his coaches lack of support, he held on to the hope that they would give him the reassurance that he was still a member

of the team (which he so desperately wanted). Unfortunately this lack of support was also evident (in phase 1) by the athletic trainers working with him. Participant 1 was quite angry and frustrated that once his injury was diagnosed to be season-ending, his daily contact with the athletic trainers stopped. During the phase 1 interview, participant 1 explained what he expected from the athletic trainers:

> ...to push me and tell me exactly what to do rather then me having to experiment how that feels on my own... all you need is a simple phone call to say "hey, come in here for twenty minutes" and they don't even need to sit there and watch me do it as long as I come in.

In contrast, once his surgery was complete and he began his post-surgery rehabilitation, he was content with the care he received as he stated during the phase 2 interview:

> I thought they did a nice job allowing me to come in and he (head athletic trainer) was there for any questions if I had any. I can remember back then I wish I had a little more individual contact with them, having them tell me what I should do here and there...like the students came in at the beginning and then they slacked off there at the end. But I was happy I guess.

Still, there seemed to be a general decline in energy and support from the student athletic trainers who were working with participant 1, even though he was content with his head athletic trainer. It appeared that participant 1 became less of a priority when he was able to start doing exercises on his own (i.e., which took several weeks). Although he needed less physical support as he progressed, he still desired social support from the athletic training staff.

Unfortunately this lack of support continued in the summer when he was working at home with physical therapists. In fact, reference was made to the importance of managing the athlete and his concern for participant 1 over the summer, when his athletic trainer stated:

> I'm a little concerned because I didn't know what I'm sending him home to. I just wanted him supervised at some level regularly throughout the summer. People can get lost if there isn't someone there to monitor them and sort of encourage them and give them what they need to know to go to the next step.

It was obvious that this lack of support (i.e., from coaches, athletic trainers, physical therapist) bothered him and impacted his motivation and perseverance over the summer. According to Fisher et al. (1993) long-term motivation or adherence will depend in large part on the rapport that develops between the athletic trainer (physical therapist) and athlete. Regrettably, this rapport did not take place during the summer months he was rehabilitating under the care of his physical therapists.

In stark contrast, participant 3 had a strong support system that consisted of numerous individuals. His athletic trainer explained:

> A...probably in the fifteen years that I have been here, he was fortunate to have probably the best support system that I have seen. A...that came from a number of different standpoints. First of all he has a very close family, his home is not too far from here so he was able to get home occasionally. His parent's came up for all of our lacrosse games, home and away. So, he saw a lot of his family, they are really very positive people, very down to earth, you know don't let this bother you just work through it and get it squared away, kind of thing. So, I think he gets a lot of that attitude from his parents. He is also a popular member of the team, has a lot of friends on the team that were pulling for him, that wanted him to get back and were willing to help him. You know if he couldn't drive for a couple days after surgery they would give him rides, take care of him, look after him, those kinds of things. And then a couple of the student athletic trainers that were working with him also happened to be people, prior to his injury, he knew and were friends of his. So, right from the time he was injured he had people there to kind of take care of him, but also to not let him feel sorry for himself and get him going on early pre-surgical rehab and all those kinds of things. So I think he really had an ideal situation from that standpoint because he had the support of athletic trainer students, his teammates, and the support of his family.

It was also apparent (i.e., via observation) that he was given additional attention and support while in the training room when compared to other injured athletes. This was

primarily due to having athletic trainer/student friends who took extra time in answering questions, gave him one-on-one care, and provided significant positive feedback.

Not only was participant 3 supported by the people he needed the most (i.e., coach, family, teammates, athletic trainers, friends) but this support continued throughout his entire rehabilitation. In fact, he never experienced a time in which he felt unsupported.

Participant 2 had a consistent support system with family members, friends, and teammates in the beginning, then her physical therapists over the summer, and then once again her teammates and friends when she returned to school. Participant 2 always felt she had some type of positive support system. In discussing her support from the athletic trainers, physical therapist, and doctors she stated:

> It started off last spring here with the trainers. The head trainer was always very direct and clear. If I needed anything I could talk to her. She helped me out a lot. I can give her credit for just informing me of the importance of it (rehabilitation) before surgery. Met with the surgeon a couple times before surgery, just explained the procedure from like the first minute to the last minute. Pretty much worked with the same therapist the whole time. I guess all the people I worked with made it very thorough and that was important to me.

Participant 2 talked also about the support she received from her teammates when her injury initially occurred. She said:

> ...at first they were very sympathetic and felt really bad and everything and everyone said they were sorry and if I needed anything to let them know. But obviously as it has gone along it has been less and less which is understandable. I mean they have to move on. They have other things to worry about...but they have been good, so they are very much concerned and just want me to do well.

According to Hardy et al. (1999), the more effective the social support an individual receives, the better his or her mental and physical health. Conversely, ineffective or low quantities of social support reduce mental and physical well-being.

Having a social support structure through family, peers, coaches, other injured athletes, or therapists, provides a valuable foundation on which to tackle the hardships of recovery from injury (Flint,1999; McDonald & Hardy, 1990; Rose & Jevne, 1993; Wiese & Weiss, 1987). Results from this study support such statements.

The athletes' physical responses to surgery and how quickly they progressed had an impact on their mental well-being.

The second underlying element that impacted the participants' experiences was how well their knee healed following their operation. In explaining what usually takes place with this type of recovery, athletic trainer 3 stated:

> We typically see people improve for several days and then they'll feel like they don't improve for a few days or they even go backwards and then they, you know their gradual progression is up but there are little down turns along the way.

With a long rehabilitation comes the opportunity for boredom and frustration. This is especially true if the individual is not seeing the desired results or worse, if they take a few steps backwards. According to McDonald and Hardy (1990), perceptions of poor rehabilitation progress have been linked to strong negative emotional responses by injured athletes.

For example, participant 1 had a very difficult time with swelling in his knee for the first four to five weeks after surgery. His athletic trainer explained:

> I think his swelling went up and down more so then I would have expected and I think that, and the bike. I have never had anyone really complain about the bike and swelling, but that was almost like you could see it. He would do the bike and come in the next day and be swollen so we would take the bike out of the routine.

He added later:

> We would like to see that inflammation from the surgery which is always pretty significant, to go down rapidly and then slowly disappear. His had a tendency to

> come back and forth if he did a little too much in one activity he would seem to swell.

As the swelling for participant 1 did not decrease as expected, his athletic trainer became concerned. He stated:

> I guess as I sat and thought early on, I was a little concerned. I didn't let him know that but I was a little concerned. Some people's body just responds differently in that area, in that inflammation area where they just go up and down. Some people are real swellers some people are not. Physically that is probably my biggest concern.

As observed, his swelling held him back on numerous occasions because he would have to rest it for consecutive days or take it easy while he was in the training room. Not only did this lengthen his physical recovery but it also agitated and frustrated him because he was unable to progress. In discussing this participant's mood during this time, his athletic trainer said:

> I saw a couple moods with him. For the most part I think he was fairly positive and was very business like. There were on more then one occasion, that I saw some real discouragement where he thought his knee wasn't responding size wise (i.e., swollen) like he thought it should.

In contrast participant 3, had a very different reaction to the surgery. His athletic trainer explained:

> ...he reacted atypically in that he had very little swelling post operatively a...great motion that moved along very well. Probably the thing that was the most atypical was the lack of swelling around the joint area. He had some but nowhere near the typical post-op that you would typically see and I think that was one of the things that really spend him up as he got into those very early stages of rehab. He didn't have to take several days where our main focus was just on swelling reduction. We were able to jump into things from an earlier...point then we would have been because we were able to avoid that.

The same athletic trainer later added:

> Yea, and we weren't pushing him super hard because our time frame was you know, this person needed to be back ready for fall lacrosse, not for the spring because we didn't feel like that was reasonable at all. But he still progressed very

> rapidly, just because that was the nature of his body and also the nature of his mental approach to things.

In his journal (1-week post surgery), participant 3 wrote:

> I felt I made really good progress this week, my flexion and extension progressively got better which keeps my esteem high. My swelling also seems to have gone down rather quickly which is a good sign.

When athletic trainer 3 was asked if participant 3 had any setbacks with his rehabilitation, he responded:

> A...very few. Possibly as I think about it a...really none. He really had almost a straight line in an upward direction in terms of if you were to graph everything combined somehow...motion and swelling-reduction and strength-return and function. All those things, the graph would be in an upward direction without anything that would really be considered a set back.

For participant 2, she experienced what the athletic trainers described as a "typical" recovery. In describing how her leg looked after surgery, participant 2 stated, "I had a lot of bruising up and down my leg, on the outside especially. And just like a swollen ankle, just swollen all the way down." She also explained how her knee felt in the first two months of post-surgery rehabilitation when she said, "I've kind of had problems with inflammation and that is what hurts it a lot. Like the, trying to straighten it when it is swollen."

Similar to participant 1, participant 2 also found herself progressing for some time and then showing little or no improvement. She stated:

> The first six (weeks of rehab) is obviously a lot of progression, and then you start to see things leveling off...um, like doing the jog everyday and the stairmaster, it got really repetitive. Where as like the first six weeks it was still adding something all the time.

This back and forth progression is often common in recovery and was also expressed during the phase 3 interview with participant 2. She stated:

> There was a period of time where I was kind of stuck and my knee wasn't giving me the full range of motion that I wanted or that was expected. And now that I am getting out of that, I'm real happy about it.

Unfortunately, athletes have little or no control over how body tissue will heal or the inflammation response following surgery. The physical component of recovery is important and will likely have a significant impact on any injured athlete's well-being. According to Bianco et al. (1999), if the athlete is working hard and experiencing gains then he/she will likely have a more positive outlook on their injury and rehabilitation. Conversely, if the athlete is not seeing any gains or even getting a little worse, their attitude and mental approach to their rehabilitation may take a negative turn (Bianco et al., 1999). According to Brewer, Van Raalte, and Petipas (1999), the extent to which patients accept responsibility for their rehabilitation progress may depend upon the rate of recovery, with athletes who recover slowly being less likely to claim responsibility for their rehabilitation progress then are athletes who recover rapidly.

The athletes internal desires to keep a high motivation over a long rehabilitation had an impact on their recovery and return to play.

The third and final element that impacted these athletes experiences, was how consistent the injured athletes were with their motivation to accomplish their day-to-day rehabilitation. According to Wiese and Weiss (1987), finding a way to motivate injured athletes to adhere to rehabilitation programs is critical because the prescribed programs of therapy and training will be useless unless athletes stick to them. In describing the reality of rehabilitation and what needs to come from the injured athlete, athletic trainer 3 stated:

> ...you don't go through a surgical procedure, an injury like this and a surgical procedure like that without there going to be some negative days and some days where things hurt and where you don't really feel like doing stuff...and if

> you have the mental strength to just work through that and overcome it. You're that much better off.

In describing the motivation of participant 2 during her pre-surgery rehabilitation, her athletic trainer stated:

> ...it wasn't bad, um, I have definitely dealt with less motivated. I think she was experiencing um a lot of pain initially and sometimes it doesn't matter how much you tell, try to tell the athlete that they need to work through some of that, some people just don't. I kind of try and let the athlete know that it is ok to experience that pain and if they can just deal with it, we can get through this, it will be better in the long run.

This athletic trainer went on to discuss her concerns for participant 2 because this athlete would be completing her post-surgery rehabilitation at home (i.e., away from the athletic trainers). She stated:

> ...to recover fully from an ACL reconstruction...she needs to be consistent with her rehab and again, she needs to push through some of that discomfort and work hard on strength, and so hopefully she is doing that. I guess that would be my biggest concern, that the physical therapist whoever is working with her recognizes that perhaps she is not the most motivated person in the world and can push her through.

According to participant 2, her motivation fluctuated in accordance to how her body was responding to the rehabilitation. Specifically, she said, "I'm motivated seeing results, seeing a change. I think that dead period, just like anything if you don't see progress then you stop getting so motivated."

Participant 3 showed a high level of motivation throughout most of his rehabilitation, as was explained by his athletic trainer:

> He is a very highly motivated person and a...he is a person that we had to hold back a little bit and make sure he wasn't doing anything that was too aggressive that he wasn't ready for. He seemed to me to be a very highly motivated person a...someone who didn't need any real external motivation at least from us.

This same athletic trainer also added:

> He was one of those people very easy to work with from a rehab standpoint because you knew he was going to be there, you knew he was going to show up on time a...he wasn't going to complain. If he had some discomfort or pain or whatever, he wasn't going to...he wouldn't get too concerned about that, he was just going to do what needed to be done and move onto the next day.

According to this athletic trainer, one reason that he believes participant 3 recovered so well was because he was able to stay motivated on the days when he did not feel like working hard. He stated:

> I think it is impossible to go through that and not have some days where it gets boring, where it gets repetitious, where it...you don't feel like making progress. I feel like he was able to put that stuff aside and just focus on what he needed to do and that was one of the reasons he did so well.

Participant 3 was often observed to have a very strong overall motivation. He was a focused and determined athlete who was willing to do what was necessary in order to continue progressing and return to his sport. On the few days he was less motivated, he still put in tremendous effort on the tasks he needed to accomplish. It just took him longer to complete all his exercises.

Concerning the motivation in rehabilitation for participant 1, his athletic trainer explained:

> ...he has been pretty easy to work with and done what he has been asked to do and he has done what he thinks he should do...so I think he had been doing a pretty good job.

Participant 1, under the direct care of the athletic trainers, worked hard on most days to accomplish his rehabilitation. There were definitely times when he just went through the motions and did not focus completely, but he was consistent enough to where the athletic trainers felt confident in his progress before he left for the summer.

The athletic trainer for participant 1 later added the following about this participant's motivation:

> I would say it [motivation] was good. It probably wasn't exceptional. But I don't think I have a real question about his motivation. I don't know what his summer motivation will be like. I don't know if he will have the tendency to take the easy way out at times if there isn't someone, if he isn't seeing someone everyday, like he was here.

Unfortunately, this participant's motivation declined dramatically over the summer and he found himself rehabilitating his knee while also working on his basketball skills when he returned to school. His athletic trainer talked about the importance of completing his rehabilitation over the summer months, when he stated:

> I tried to stress to him that really the summer was the time to get the work done...this is the time to get it done. Don't come back and try to be planning on practicing and working on this leg at the same time. It doesn't work very well.

Conclusion

As depicted in Vogan's Biopsychosocial view of injury rehabilitation (i.e., Figure 9) each athletes experience with the three interrelated elements produced different outcomes even though each athlete suffered the same injury. Overall participant 1 had a poor support system, had a poor physical reaction to the surgery, and had motivation that fluctuated from good to poor. In the end, this participant was not able to make a return to basketball for his senior season. His coaches told him that they did not envision him fitting into the line-up under his present physical condition. He worked hard at his rehabilitation, despite a poor support system from his coaches and athletic trainers. Still, he did what he had to and made progress, despite swelling in his knee.

While already feeling alone and isolated because his coaches had not taken any interest in his recovery (i.e., they never called him during this experience), when he returned home for the summer he was confronted with the same lack of support from his physical therapists. According to Brewer, Van Raalte, and Petitpas (1999) arguably the

most important interactions in the sport injury rehabilitation are those between patients and the sports medicine practitioners (i.e., physical therapists and athletic trainers) who direct their rehabilitation efforts on a day-to-day basis.

With a more positive experience (i.e., with his coaches and physical therapists) his motivation may not have decreased to the point it did. Likewise, with fewer physical problems resulting from his surgery, his summer months may have been more positive. It is no surprise that it was during these summer months that he began to question whether or not he should "quit" playing basketball.

Participant 2 had a good support system, her physical response to the surgery was good, and her motivation fluctuated from poor to good. Although she was not extremely motivated, as attested to by her athletic trainer and via observations, she was released to play after seven months post surgery. She did struggle with motivation toward the middle of her recovery when rehab became boring and repetitive, but she always had support and was able to persevere. She also had a typical physical response to her surgery, with decreased swelling soon after her operation.

Participant 3 had a great support system, his physical recovery was great, and his motivation was great. He recovered fully after only four months post surgery. This participant had a "best case scenario." His support system was incredible, his positive physical response to the surgery allowed him to get a jump start on some of his strength training (i.e., because he did not have any of the normal swelling in his joint), and his motivation remained strong throughout recovery.

According to Petipas, Brewer, and Van Raalte (1996) the ideal intervention program for college-athletes should be multidimensional and include enhancement,

support, and counseling components. The effects from injury impact areas outside sport as well. In fact, participant 3 stated:

> It's not, it's not just a sport injury, it's an everything injury. It's a...it just affects your entire life. It affects the way you sleep. It affects the way you get around. It affects your relationship with people. It affects your work. It affects your school. It affects a lot of things and I don't think I really realized or imagined that it was going to have this big of an impact on my life as it has...

Because injury can effect numerous life roles, a multidimensional approach to treating injury is important. With support, motivation, and a balanced physical recovery (i.e., progression), athletes are more likely to recover fully from an ACL injury. Results from this study show what can happen when all three elements are working together in a positive manner (i.e., participant 3) and a negative manner (i.e., participant 1).

It is suggested that support be consistent (i.e., from athletic trainers, physical therapists, coaches, family, friends, teammates), the individual athlete take responsibility for his or her rehabilitation and motivation, and the sport medicine team (i.e., athletic trainers, physical therapist, surgeon) educate athletes to the "typical" responses that often follow surgery and rehabilitation.

It seems that when recovering from an ACL tear, one should expect the recovery to be difficult, demanding, and (mentally and physically) challenging. Even for participant 3, who had a great support system, a high level of motivation, and experienced no major set-backs with his rehabilitation, his injury experience was still difficult. There is no magic formula that will guarantee an "easy" experience. While some similarities do exist, athletes also remain unique in these experiences following a season-ending ACL injury.

Chapter 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The majority of similar experiences that emerged for each athlete was a combination of mental, emotional, and physical issues. Each injury phase (i.e., phase 1, 2, and 3) represented a different "reality" for the athletes as they worked closer to their ultimate goal of returning to play.

Phase 1 confronted the athletes with a combination of dealing with their physical limitations, realizing the consequences of their injuries, and understanding that they would have to rely on others to fulfill daily tasks (e.g., grocery shopping, laundry, and driving). Significant concerns of re-injury, never playing to their potential, and accepting a role on the sidelines were apparent during this time period.

Phase 2 was dominated by uncertainty with how each athlete was going to mentally overcome his/her injury, despite an increase in motivation due to sport specific skills being introduced to their rehabilitation programs. This finding suggests that as each athlete was cleared to participate in more physically demanding activities, doubts consumed their thinking as a result of a fear of re-injury. This concern may be especially prominent in the present study, as no single athlete had been through a season-ending injury before.

Phase 3 revealed an increased focus to improve overall physical fitness (i.e., leg strength as well as cardiovascular endurance), excitement to be playing with teammates, and the realization of lessons learned from their season-ending injury experiences. For most of the athletes (i.e., participants 2 and 3) this phase represented a shift from

rehabilitating their knee, to preparing for their sport return. This was demonstrated by the athletes moving out of the training room and onto their field of play, as they integrated back to their respective sports through restricted practice (i.e., participating in certain activities but not all). With the realization that their injury was almost behind them, also came a recognition of how much they learned about themselves, their love for their sport, and life in general.

The dissimilar experiences that emerged throughout the three phases are most noteworthy because each athlete suffered the same injury. Although there were many parallel experiences, this study highlighted 38 unique responses to an ACL injury. This finding supports that understanding the "type" of injury an athlete suffers is no more important than understanding the "individual" who is experiencing it. In other words, comprehending the physical component of a specific injury is, at most, half of the total experience for the athlete and only part of the information that professionals working with injured athletes must know.

As discussed in chapter five, the core issues that highlighted the different experiences were related to the athletes' motivation, social support, and physical recovery from surgery. The more positive the experiences, the more positive the injury outcome. Conversely, the more negative the experiences, the more negative the injury outcome.

Conclusions

As shown with the present study, suffering a season-ending ACL injury is painful and requires months of rehabilitation to recover completely. It was a life altering experience that tested each athlete's mental and physical determination, patience, and

emotional strength. As a result, the athlete's season-ending injury disrupted their sport participation, daily living routines, and social lives.

Although it was possible to have a positive experience related to one's motivation, social support, and physical recovery (i.e., comparing participant 1 and 3), recovering from an ACL injury was difficult. Because an athlete cannot control how helpful his/her support system will be or how well his/her body will heal from surgery, the individual must take responsibility for his/her perspectives of the injury and decision making during rehabilitation. As challenging as it may be, if the athlete is confronted with mostly negative circumstances revolving around his/her recovery, a successful outcome is still possible with a consistent positive mindset. In short, the daily choices an athlete makes during recovery will impact his or her overall injury experience positively or negatively.

Recommendations for Future Research

First, it is necessary to have a follow-up to the present phenomenological study and design. Replication, which addresses the injury experiences of athletes throughout their injury and rehabilitation is essential. Future work should include more subjects and more interviews throughout the three phases. If possible, it may also be beneficial to interview the athlete's coach concerning how he or she perceives the injured athlete's progression.

Second, the injury experiences of athletes experiencing a season-ending ACL injury should be compared to other season-ending injuries (e.g., a back or neck injury). It may be that a season-ending ACL injury will produce different emotions and behaviors as compared to an athlete recovering from a broken leg or a dislocated shoulder. These

types of injuries should be investigated using similar qualitative techniques to enhance the possibility for in-depth data collection throughout the entire injury and rehabilitation experience.

Third, in addition to investigating different types of season-ending injuries, it seems important to study the effects of injury across different populations (i.e., youth sport, high school, Division I, II, and III collegiate athletes, and professional). With an in-depth understanding of what athletes experience at different levels, a greater comprehension of the overall athletic injury experience can likely be discovered.

As results of this study indicated, an athlete's response to season-ending injury was impacted by their support system, motivation, and overall physical recovery. Future research studies should focus on these three areas in connection with athletes' overall injury and rehabilitation experiences. It may be beneficial to have these three elements investigated in relation to short-term, season-ending, and career-ending injures (i.e., to uncover the possible relationship with varying degrees [severity] of injuries).

Due to the time constraints that many researchers may face, if it is not feasible to spend 12 to 16 months engaged in data collection, a case study research design is recommended. With this type of qualitative data collection, the researcher needs only one (n=1) subject to satisfy this research methodology. Regardless of the number of subjects involved with the research study, with more in-depth descriptions of the potential injury processes, professionals working with injured athletes will benefit tremendously from new insights, behaviors, and emotions that athletes may experience.

Not only is it important to understand "what" and "why" athletes experience what they do through injury, but also what can be done to make their recovery physically and

mentally successful. The long term goal of any rehabilitation is to return the athlete to their sport. With further study into the injury experience, a greater awareness will likely unfold for sport medicine professionals on how best to treat and support their injured clients.

Although the results of this study provide a greater insight into the injury and rehabilitation experience, much more research is needed. Several recommendations have been expressed in the anticipation of others continuing with and adding to the outlined results and conclusions.

APPENDIX A

RECRUITMENT STATEMENT: ATHLETES AND ATHLETIC TRAINERS

Athlete Recruitment Statement

The purpose of this study is to provide an in-depth description of how you, as a student-athlete, perceive a season-ending injury. You will be asked to participate in three interviews throughout your injury and rehabilitation (i.e., two weeks after your initial injury, half way through your projected rehabilitation, and two weeks prior to completion of your projected rehabilitation), with each interview lasting approximately 60 minutes. Each interview will be audiotaped and transcribed into a verbatim written document and presented to you in order for you to make comments and to provide clarification on the information obtained. You will also be observed in your rehabilitation sessions by the researcher and asked to keep a weekly journal outlining your experiences related to your injury and rehabilitation. The researcher and Dr. Greg A. Shelley (thesis advisor) will be the only persons to have access to these tapes and observation notes.

Understanding how a Division III student-athlete reacts to a season-ending injury is extremely important to the field of sport psychology. Your involvement in this research project has the potential to help many other injured athletes in the future. By getting a better perspective of what a collegiate student-athlete may experience with a season-ending injury, new ideas and strategies for helping injured athletes can be developed and implemented. But first, it is important to know what an athlete experiences throughout a season-ending injury. This is why your participation is greatly needed.

Athletic Trainer Recruitment Statement

The purpose of this study is to provide an in-depth description of how Division III student-athletes perceive a season-ending injury. You will be asked to participate in one interview (i.e., when an injured athlete has completed half of his or her projected rehabilitation) designed to investigate your perceptions of an athlete's injury experience. Your interview will last approximately 45-60 minutes, and will be audiotaped. The interview will be transcribed into a verbatim written document and presented to you in order for you to make comments and to provide clarification on the information obtained. The researcher and Dr. Greg A. Shelley (thesis advisor) will be the only people to have access to these tapes.

APPENDIX-B

ATHLETE RECRUITMENT PERMISSION FORM

Athlete Recruitment Permission Form

I, _____ give _____
Athlete's Name Trainer's Name

permission to contact Rex R. Vogan II concerning my interest in participating in his research study. I give permission to the trainer to disclose my name and phone number to Rex R. Vogan II so he can contact me.

I have read the above and understand its contents. I acknowledge that I am 18 years of age or older.

_____
Print or Type Name

_____ _____
Signature Date

_____ _____
Witness Date

APPENDIX C

INFORMED CONSENT: ATHLETES AND ATHLETIC TRAINERS

Athlete Informed Consent Form
Season-Ending Injury

1. Purpose of the study

The purpose of this research is to study the effects that a season-ending injury has on Ithaca College student-athletes. This study will attempt to provide a greater understanding of the potential and varied psychological factors associated with experiencing and rehabilitating from a season-ending injury.

2. Benefits of the Study

Participating in this study will allow you the opportunity to discuss the impact that a season-ending injury has had on your life. By sharing your thoughts and experiences, you may better identify the issues that are important in making the smoothest transition through rehabilitation. Results will contribute to the body of literature dedicated to understanding the psychological experiences associated with season-ending injuries. The knowledge that will likely be gained from this research may give sport psychologists, counselors, athletic trainers, and physical therapists an understanding of what Division III student-athlete experience when confronted with a season-ending injury.

3. What You Will Be Asked To Do

You will be asked to participate in three interviews throughout your injury and rehabilitation. The schedule of interviews will be as follows: 1) two weeks after your injury, 2) when you have completed half of your projected rehabilitation, and 3) two weeks prior to your projected completion of rehabilitation. Each interview will take approximately 45-60 minutes to complete. All interviews will be audiotaped and transcribed into verbatim written documents and presented to you in order for you to make comments and to provide clarification on the information obtained. You will also be observed in rehabilitation sessions where the researcher will document daily experiences related to your injury. Finally, you will be asked to keep a weekly journal documenting your emotions and reactions to your injury and rehabilitation.

4. Risks

Certain issues regarding the injury may cause anxiety and apprehension. The injury experience may be difficult for some athletes and create related stress. There is no foreseeable physical harm related to this study.

5. If You Would Like More Information about the Study

If you have any questions regarding the study, you can contact Rex R. Vogan II at (315) 685-3989.

Initial Your Name

_____

6. Withdrawal from the Study

Participants in this study are free to withdraw and discontinue at any time. You are free to skip questions during the interviews. There is no penalty for withdrawing. If you do desire to withdraw from the study, please contact the researcher as soon as possible.

7. How the Data will be Maintained in Confidence

Tapes of the interviews and written transcripts of observations will be kept in a locked container. Interview responses and transcripts will be kept confidential. Only the researcher and his thesis advisor will have access to this information. Your name will never appear on any document or transcript.

I have read the above and understand its contents. I agree to participate in the study. I acknowledge that I am 18 years of age or older.

_____
Print or Type Name

_____ _____
Signature Date

_____ _____
Witness Date

I give my consent to be audiotaped.

_____ _____
Signature Date

Athletic Trainer Informed Consent Form
Season-Ending Injury

1. Purpose of the study

The purpose of this research is to study the effects that a season-ending injury has on Ithaca College student-athletes. This study will attempt to provide a greater understanding of the potential and varied psychological factors associated with experiencing and rehabilitating from a season-ending injury.

2. Benefits of the Study

Participating in this study will allow you the opportunity to discuss the impact that a season-ending injury has had on your injured athlete. Results will contribute to the body of literature dedicated to understanding the psychological experiences associated with season-ending injuries. The knowledge that will likely be gained from this research may give sport psychologists, counselors, athletic trainers, and physical therapists an understanding of what Division III student-athlete experience when confronted with a season-ending injury.

3. What You Will Be Asked To Do

You will be asked to participate in one interview (i.e., when an injured athlete has completed half of his or her projected rehabilitation) designed to investigate your perceptions of an athlete's injury experience. Your interview will last approximately 45-60 minutes and will be audiotaped. The interview will be transcribed into a verbatim written document and presented to you in order for you to make comments and to provide clarification on the information obtained.

4. Risks

There are no foreseeable risks related to this study.

5. If You Would Like More Information about the Study

If you have any questions regarding the study, you can contact Rex R. Vogan II at (315) 685-3989.

6. Withdrawal from the Study

Participants in this study are free to withdraw and discontinue at any time. You are free to skip questions during the interviews. There is no penalty for withdrawing. If you do desire to withdraw from the study, please contact the researcher as soon as possible.

Initial Your Name

_____

7. How the Data will be Maintained in Confidence

Tapes of the interview will be kept in a locked container. Interview responses will be kept confidential. Only the researcher and his thesis advisor will have access to this information. Your name will never appear on any document or transcript.

I have read the above and understand its contents. I agree to participate in the study. I acknowledge that I am 18 years of age or older.

_____
Print or Type Name

_____ _____
Signature Date

_____ _____
Witness Date

I give my consent to be audiotaped.

_____ _____
Signature Date

APPENDIX D

BIOGRAPHICAL SKETCHES: ATHLETES AND ATHLETIC TRAINERS

Athletes

Subject:	Athlete's designation by numbered interview
Gender:	Athlete's Gender
Sport:	Athlete's primary sport affiliation
Age:	Athlete's age when interviewed
Height:	Athlete's height
Weight:	Athlete's weight
Year:	Athlete's year in school when injury occurred
Major:	Athlete's academic major when interviewed
Date of injury:	Date when injury occurred
Circumstances of injury:	How the injury happened
Re-injury:	First time vs. re-injury designation
Previous injuries:	Description of any injuries experienced before
Fitness level:	Athlete's perception of fitness level at time of injury
Diagnosis:	Initial diagnosis provided by training staff
Prognosis:	Initial prognosis provided by training staff
Projected Rehabilitation:	Amount of time it will likely take the athlete to complete their rehabilitation

Subject:	1
Gender:	Male
Sport:	Basketball
Age:	21
Height:	6 "2"

Weight:	205 lbs.
Year:	Junior
Major:	Health and Physical Education
Date of Injury:	February 7, 2001
Circumstances of Injury:	Injured while practicing
Re-injury:	No
Previous Injuries:	No
Fitness level:	Peak level
Diagnosis:	Torn ACL
Prognosis:	Surgery
Projected rehabilitation:	4-6 months

Subject:	2
Gender:	Female
Sport:	Softball
Age:	19
Height:	5 '7'
Weight:	145
Year:	Freshman
Major:	Health and PE
Date of injury:	March 15, 2001
Circumstances of injury:	During a game in Florida
Re-injury:	First time injury

Previous injuries:	Hip-flexor injury
Fitness level:	50% of Maximum
Diagnosis:	Torn ACL
Prognosis:	Surgery
Projected Rehabilitation:	4-6 months

Subject:	3
Gender:	Male
Sport:	Lacrosse
Age:	21
Height:	5 "11"
Weight:	195
Year:	Junior
Major:	Sport Studies
Date of injury:	January 17, 2002
Circumstances of injury:	During practice
Re-injury:	First time injury
Previous injuries:	Broken wrist, foot, and toes
Fitness level:	80 to 85% of maximum
Diagnosis:	Torn ACL
Prognosis:	Surgery
Projected Rehabilitation:	4-6 months

Athletic Trainers

Subject:	Athletic Trainer's affiliation to athlete by number
Gender:	Athletic Trainer's Gender
Age:	Athletic Trainer's age when interviewed
Education:	Athletic Trainer's education background
Certifications:	Athletic Trainer's certification background
Years Experience:	Athletic Trainer's experience when interviewed
Specific injury experience:	Athletic Trainer's experience related to the specific type of injury the athlete has sustained
Rehabilitation Strategy:	Strategy the Athletic Trainer has taken to help the athlete recover completely

Subject:	1
Gender:	Male
Age:	44
Education:	Masters Physical Education – Concentration Athletic Training – Indiana State University
Certifications:	NATA – 1987 New York State certified
Years Experience:	14 years
Specific Injury Experience:	10 different athletes with ACL tears
Rehabilitation Strategy:	Build strength Have surgery Work on general range of motion/ swelling/ pain Start strength 6-9 month average for full activity

Subject:	2
Gender:	Female
Age:	36
Education:	B.S. Physical Education M.S. Physical Education/ Athletic Training
Certifications:	Certified Athletic Trainer Certified Strength and Conditioning Specialist
Years Experience:	13 years
Specific Injury Experience:	Significant experience
Rehabilitation Strategy:	Reduce swelling Increase Range of Motion Have surgery Work on general range of motion/ swelling/ pain Start strength 6-9 month average for full activity

Subject:	3
Gender:	Male
Age:	43
Education:	M.S. Athletic Training
Certifications:	Certified Athletic Trainer
Years Experience:	19
Specific Injury Experience:	Significant
Rehabilitation Strategy:	Reduce swelling Increase Range of Motion Have surgery Work on general range of motion/ swelling/ pain Start strength 6-9 month average for full activity

APPENDIX E

INTERVIEW GUIDE QUESTIONS FOR ATHLETES

Questions for Interview 1 (two weeks after injury)

1. Describe a typical day since becoming injured?
2. Overall, how would you describe your injury experiences since sustaining your current injury?
3. What (if anything) has changed for you since sustaining your injury?
4. Overall, how do you feel right now?
5. What are you doing to overcome and cope with your injury?
6. What have been/are your greatest concerns as you attempt to overcome your injury and return to play?
7. How do you feel about yourself since your injury?
8. How has your injury most influenced your day-to-day life?
9. How confident are you that you will overcome your injury? What do you perceive to be most difficult in attempting to rehab?
10. Is there anything that you would like to share concerning your injury that we have not covered in this interview?
11. How have you felt in sharing your injury experiences with me?

Questions for Interview 2 (midpoint of rehabilitation)

1. Describe a typical day of rehabilitation?
2. Overall, how would you describe your injury experiences in the past X number of weeks?
3. Since first becoming injured, what (if anything) has changed for you?
4. Overall, how do you feel right now? How have your feelings changed over time?
5. What are you doing to overcome and cope with your rehabilitation?
6. What have been/are your greatest concerns as you attempt to overcome your injury and return to play? What is the hardest part about being injured?
7. How do you feel about yourself since your injury? How have these feelings changed over time?
8. How has your injury most influenced your day-to-day life?
9. How confident are you that you will overcome your injury? What do you see as most important in successfully completing rehab?
10. Is there anything that you would like to share concerning your injury that we have not covered in this interview?
11. How have you felt in sharing your injury experiences with me?

Questions for Interview 3 (two weeks prior to projected completion of rehab)

1. Describe a typical day of rehabilitation?
2. Overall, how would you describe your injury experiences as they relate to your injury and rehabilitation to this point?
3. As you get closer to the end of your projected rehabilitation, what has most changed for you from the initial injury to now?
4. What (if anything) have you learned from this injury experience?
5. What are you doing to continue to cope with your injury as you finish up your rehabilitation?
6. What have been/are your greatest concerns as you continue to overcome your injury and move forward?
7. How do you feel about yourself right now? How have these feelings changed over the course of your injury and rehabilitation?
8. How has your injury most influenced your day-to-day life?
9. How confident are you that you will continue to overcome your injury and return to your sport?
10. Is there anything that you would like to share concerning your injury that we have not covered in this interview?
11. How have you felt in sharing your injury experiences with me?

APPENDIX F

INTERVIEW GUIDE QUESTIONS FOR ATHLETIC TRAINERS

Questions for Athletic Trainers (midpoint of rehabilitation)

1. Describe a typical day for (name of athlete) since he/she sustained his/her injury?
2. Overall, how would you describe (name of athlete) injury experience?
3. What (if anything) has most changed for (name of athlete) since sustaining his/her injury?
4. Based on what you have witnessed (or heard), how do you think (name of athlete) is feeling right now?
5. What is (name of athlete) doing to overcome and cope with his/her injury and rehabilitation?
6. Based on what you have witnessed (or heard), what are (name of athlete) greatest concerns as he/she attempts to overcome his/her injury?
7. How do you think (name of athlete) feels about him/herself since his/her injury?
8. In what ways have you perceived (name of athlete) injury to have most influenced his/her day to day life?
9. How confident are you that (name of athlete) will psychologically overcome his/her injury?
10. Is there anything that you would like to share concerning your perceptions of (name of athlete) injury that we have not covered in this interview?

APPENDIX G

ATHLETE JOURNAL GUIDE

Journal Questions

1. How did you feel (emotionally and physically) in your rehabilitation sessions this week? What contributed to these feelings?
2. What aspects of your rehabilitation and healing have been most difficult this week? Why were they difficult?
3. What aspects of your rehabilitation have been easy? Why were they easy?
4. How do you feel about the progress you have made this week?
5. How has your pain level been this week?
6. How has your motivation been in doing your rehabilitation?
7. Is there anything that you would like to share concerning your rehabilitation this week that was not covered in the previous questions?

APPENDIX H

HIGHER-ORDER THEMES

PARTICIPANT 1

Subject 1

Phase 1: Higher Order Themes

1. He was concerned about re-injury, getting himself back into basketball shape, and getting his flexibility and range of motion completely back.

2. He had complete confidence in himself and his work ethic but realized just how long and difficult the process is of returning to play.

3. He was coping with his injury by creating some type of physical activity he can do, continues to lift weights with his upper body, and was doing his pre-surgery rehabilitation three days a week.

4. He was extremely surprised, frustrated, angered and felt isolated by his coaches' and athletic trainer's lack of contact, support, communication, and guidance.

5. His injury affected his day-to-day life (e.g., needed extra time to get to classes, could not play basketball and other recreational games, and was not able to participate in some of his classes because he is a Physical Education major) and described the entire injury experience as frustrating and continuously on his mind.

6. His surgery date created a significant amount of anxiety (e.g., he had no control when it was to take place because it was up to his parents) and worry (e.g., if his surgery ended up being postponed he felt he may not be ready for the next season).

7. His support system consisted of his friends and parents.

Phase 2: Higher Order Themes

1. He did not have much confidence in the physical therapists working with him because there was no personal connection, as he was skeptical of their true intentions.

2. He felt great to be doing some type of basketball activity as it gave him confidence that his shot was still there and was less frustrated with his restrictions because physically he was able to do more.

3. Although the toughest parts of his rehabilitation entailed being out of shape with his cardiovascular stamina and having a weak leg, his motivation to continue rehabilitation and make it a priority came from having little to do.

4. He felt nervous, anxious, and a sense of urgency to start playing basketball because he was concerned about how rusty and far behind he would be compared to his teammates.

5. Although, he felt his support system primarily consisted of himself, he did admit that his parents encouraged him, yet he still did not hear from teammates, and was frustrated and angry that his coaches did not call to check on how he was progressing.

6. Dealing with his injury had been a strain mentally and felt overcoming his mental perspective will be difficult.

7. The toughest parts of being injured entailed being in that in-between stage where he was ready to play but he could not, he mentally did not know when he would be able to do what he wanted, and emotionally dealing with feeling useless.

8. His mind-set was starting to move towards not playing basketball (possibly start coaching) as he started to question whether or not he should just quit.

Phase 3: Higher Order Themes

1. His goals were to get healthy and back to playing, improve his agility, and get his legs stronger.

2. He felt great to be practicing with his teammates because it reminded him of why he plays basketball.

3. He was upset with the lack of personal attention he received from his physical therapist, was frustrated by the lack of communication and urgency by his surgeon, and continued to be very angry with his coaches' disregard for his injury, rehabilitation progress, and his role for the upcoming season.

4. Although his father and peers had encouraged him, his support system primarily consisted of himself, as he generally felt unsupported by others during his injury experience.

5. He was frustrated because he was not 100 %, he realized that he should have done more rehabilitation over the summer, and because he thought he would be working solely on his basketball skills instead of still focusing on rehabilitating his leg.

6. The toughest challenge at this phase was being "almost" done (but not quite), finding the motivation to continue with rehabilitation, feeling doubtful about future playing possibilities, and feeling jealous of healthy teammates.

7. Other then knowing first hand what it was like to go through a season-ending injury, he learned what he was made of on the inside, felt it was a challenge mentally and physically to go through this experience, and constantly questioned himself because there are no guarantees in life.

Athletic Trainer Phase 1 & 2 Higher Order Themes

1. He had concerns about the swelling in the athlete's knee and the type of supervision he was receiving at home.

2. Besides some discouragement related to his swelling, overall he was a fairly even person who never showed extreme positive or negative emotions, and whose motivation was good but not exceptional.

3. Mentally he was dealing well with his injury and accepted what he needed to do to recover completely, but felt that if basketball was taken away from him for the up coming season, that would create a whole separate issue.

4. By the time the athlete returns to school he should be working out fairly hard in the weight room, running, and doing some functional activity and believed that he will not be ready for the beginning of the season but should see the bulk of his playing time in the second semester.

Athlete Journal Phase 1, 2, and 3 Higher Order Themes

1. Emotionally and physically he felt good even though he was little nervous that he wasn't doing enough rehabilitation, constantly thought about the deadline to return next season, but overall was happy with his progress.

2. Maintaining his motivation throughout the summer had been difficult as it fluctuated from week to week, found it quite difficult to ignore distractions from getting in the way of his rehabilitation, and felt frustrated to watch friends play basketball (i.e., because he was unable to).

Author's Observations Higher Order Themes

1. His mood was usually indifferent, flat, and rarely displayed a negative or positive disposition as he expressed a business like manner, where he came in accomplished what he had to and then left.

2. His motivation and determination to attend rehabilitation sessions were good but he started to question what his motivation would be like over the summer when he was away from the school environment.

3. Swelling in his knee was a big issue causing frustration and anger over the restrictions he had in rehabilitation and he felt his body was holding him back from moving forward with recovery.

APPENDIX I

HIGHER-ORDER THEMES

PARTICIPANT 2

Subject 2

Phase 1: Higher Order Themes

1. When the injury initially occurred the athlete was hopeful that it was just a bad knee twist yet she starting thinking about her opportunity to start, competing again during the season, and questioning why this had to happen.

2. Thoughts about her surgery created a significant amount of anger and frustration because she and her coach disagreed on when the surgery should have taken place, resulting in her isolating herself from her coach.

3. The week following her ACL diagnosis she experienced pain, depression, and strong negative emotions (e.g., frustration, loss, and much crying).

4. She felt her biggest source of support was from her friends and parents and although the support had diminished from her team, overall she felt good with the encouragement she received from teammates, coaches, and athletic trainers.

5. Her injury affected her day to day life (e.g., needed extra time to get to classes, showers were very difficult, and was unable to drive) and she started thinking about how this injury was going to affect her summer (e.g., working and being physically restricted from what she truly wanted to do).

6. She struggled most with her up and down emotions, especially when she thought about her lost opportunity for the season.

7. Her biggest concerns were her surgery and what her knee would feel like when she started playing again.

8. Although she expected the first week of rehabilitation to be quite painful and uncomfortable, she fully expected to maintain her motivation and was one-hundred percent confident that she would overcome this injury.

Phase 2: Higher Order Themes

1. Although her motivation was high for the first six weeks of rehabilitation, once she began to level off (i.e., stopped making regular gains) she found it to be repetitive, frustrating, and difficult to stay motivated.

2. She was concerned and fearful of re-injury, not being able to play to her potential, and losing her starting spot on the team.

3. Although she was ninety-five percent confident in a complete return, participating at fifty percent of her normal capacity in practice provided significant frustration with her continued physical restrictions and lack of cardiovascular fitness while trying to build confidence in her knee.

4. After surgery, her primary support came from her parents and physical therapists but once back at school her support shifted to her teammates and coach.

5. She felt her injury and rehabilitation experiences were extremely long but was happy with her progression, realized her situation could be worse, and felt she would never take softball and being healthy for granted again.

6. Not only did watching her teammates play in games continue to be extremely difficult for her (as she felt like she had been injured forever) but she also acknowledged that being this close to playing (but still not capable of) might be her most frustrating time.

Phase 3: Higher Order Themes

1. She was working the hardest at increasing her muscle strength in her legs, improving her quickness through agility exercises, was at one of the most motivated stages because she was seeing results, and felt good with the decisions she made throughout her rehabilitation.

2. While extremely eager to return to softball, she struggled with being patient and working through the anticipation and extreme emotion surrounding her fist game.

3. She was not worried about losing her position on the team, felt great to be around the other players, have the opportunity to give her input, and be included with the team goals.

4. She will never take playing softball or being healthy for granted again and felt this injury experience would make her work harder and concentrate more on conditioning and training her body properly.

5. Knowing first hand the experiences associated with a serious injury, her biggest fear was getting hurt again.

6. She felt her experiences with the sports medicine team (i.e., physical therapists, athletic trainers, doctors, and surgeon) were wonderful because they all took great care of her and explained every little detail regarding her injury, surgery, and rehabilitation.

Athletic Trainer Phase 1 & 2 Higher Order Themes

1. When she first started pre-surgery rehabilitation she was coming regularly but then faded away which the athletic trainer attributed to immaturity and a lack of motivation.

2. She witnessed some depressed moods and was frustrated with the whole process but was never worried about the athlete.

3. Her biggest concern was that the physical therapist working with her over the summer recognized that she was not the most motivated person and needed to be pushed through some of the discomfort and pain.

4. She expected the athlete to be very close to being functional and working hard on her strength when she returns to school from the summer.

Athlete Journal Phase 1, 2, and 3 Higher Order Themes

1. She was very nervous about her rehabilitation after her surgery because it was very painful to bend her leg but her motivation was high.

2. Although she felt great to be practicing with her team, emotionally and physically she struggled the past few weeks and her motivation to continue rehabilitation decreased.

3. Her motivation increased significantly due to her physical progression and lack of pain which resulted in an overall happier mood.

Author's Observations Higher Order Themes

1. Her motivation to attend pre-surgery rehabilitation was low as well as her effort when she actually did show up.

APPENDIX J

HIGHER-ORDER THEMES

PARTICIPANT 3

Subject 3

Phase 1: Higher Order Themes

1. While acknowledging being moody, depressed, and angry much more often then usual, he felt the most difficult aspects of being injured were coping with his physical restrictions, not being able to do what he wanted, losing his independence both in and outside of sport, mentally overcoming his injury, watching his team play, and hearing teammates complain about practice.

2. Although ready for the challenge, confident, and motivated, he realized that rehabilitation will be painful, demanding, and difficult to regain his leg strength and trust his knee again.

3. Although comfortable and confident with his surgeon, he was very nervous about having surgery, unsure of the pain to come, and found it mentally tough knowing that his knee had very little pain, yet in 48 hours he would be unable to walk.

4. He felt a bit isolated from the team because he was not playing, but his coach made going to practice important by supporting him and including him in many areas of practice (i.e., warming up the goalies, giving advice, encouragement, and criticism to teammates and coaches).

5. His support system consisted of his parents, friends, girlfriend, teammates, and student athletic trainer he was working with.

6. His biggest concerns were that his knee will never be 100% and that he will always be second guessing the reliability of his knee.

7. The injury was much more restricting then he anticipated and he was surprised by the impact it had on his day-to-day life (e.g., not being able to throw a football with friends, needing extra time walking to classes, being unable to drive, and the discomfort of sitting in class and sleeping at night).

8. To cope with his injury he partied (i.e., drank) more then usual, yet also lifted more weights (i.e., upper body) in order to obtain some type of physical release.

Phase 2: Higher Order Themes

1. His short term goals were to increase his leg strength and improve his cardiovascular fitness in order to be 100% by the fall (his long term goal).

2. He began to incorporate lacrosse specific activities into his rehabilitation and although he did not have complete confidence in his knee, his motivation increased because he was out of the training room.

3. While very happy with the medical care he had received, his support system consisted of parents, friends, teammates, and student athletic trainers.

4. Overall, he was pleased with the progress he had made and the limited restrictions resulting from his injury, as he felt optimistic, upbeat, and much less focused on coping with his injury.

5. He felt the toughest parts of returning to play will be cutting, doing the same move that got him injured, mentally getting rid of his apprehension, and overcoming the fear of re-injury and never regaining his prior athletic level.

6. Being less challenged physically, his motivation decreased as he felt rehabilitation was repetitive, boring, and less of a priority.

7. While not wanting sympathy, he did want others to realize the difficulties, frustrations, and the overall impact of the injury on his life (e.g., financial, physical, and personal).

8. His coach continued to keep him involved with the team in a coaching role (e.g., asking for his opinion, discussing team dynamics, and helping with practice) which allowed him to feel as much apart of the team as before his injury.

Phase 3 Higher Order Themes

1. Although the surgeon felt his knee looked great he still needed to increase his leg strength, cardiovascular fitness, and explosive quickness.

2. Practicing with his team in a diminished capacity for the last three weeks of the season allowed him to see where his game was, provided a tremendous amount of excitement, and increased his confidence in his knee.

3. His focus shifted from getting his knee better to preparing for the season, as he was very happy that his injury situation was over and he could again concentrate solely on lacrosse.

4. He felt his support system had been great and that everyone (i.e., his surgeon, physician, athletic trainers, parents, friends, teammates, and coach) were always willing to help him.

5. He was concerned that he had lost a step, would not play to his potential, and that he would again have to prove himself to his coach.

6. He learned that it takes a lot of hard work to overcome this injury, felt his recovery could not have turned out better, and will never take playing lacrosse for granted.

7. Now that his recovery was complete, he would advise others who are in a similar circumstance to stay positive, to not dwell on the injury, and to make the best of it.

Athletic Trainer Phase 1 & 2 Higher Order Themes

1. His body responded very favorably to the surgery, had little swelling, and was able to progress rapidly.

2. He was a highly motivated individual who was easy to work with, did not need external motivation from others, and at times had to be held back from being too aggressive in his rehabilitation.

3. His support system was the best he had ever seen and consisted of his family, teammates, friends, and student athletic trainers.

4. He had no concerns that the athlete will recover completely and felt he should be playing summer league lacrosse in a month.

Athlete Journal Phase 1, 2, and 3 Higher Order Themes

1. His motivation to complete his rehabilitation was high for the first five weeks, declined when he became bored with his exercises, and then increased when sport specific drills were incorporated into his recovery.

2. Overall he was happy with the progress he made throughout his rehabilitation.

3. Practicing with his team (i.e., in diminished capacity) increased his confidence in his knee and excitement to work on his lacrosse skills over the summer.

Author's Observations Higher Order Themes

1. His support system was phenomenal from the student athletic trainers who worked with him on a daily basis, as he received much more personal attention then any other injured athletes in the training room.

2. Physically, this athlete recovered extremely fast from the surgery.

3. His motivation right after surgery and during the first four to five weeks was consistently high but once his exercises became less challenging and repetitive, his motivation began to decrease.

4. His mood was mostly positive while in the training room as he joked around with the student athletic trainers daily.

APPENDIX K

FINAL THEMES

PARTICIPANT 1

Subject 1

Phase 1: Final Themes

1. He was concerned about re-injury, getting himself back into basketball shape, and getting his flexibility and range of motion completely back.

2. He had complete confidence in himself and his work ethic but realized just how long and difficult the process is of returning to play.

3. He was coping with his injury by creating some type of physical activity he can do, continues to lift weights with his upper body, and was doing his pre-surgery rehabilitation three days a week.

4. He was extremely surprised, frustrated, angered and felt isolated by his coaches' and athletic trainer's lack of contact, support, communication, and guidance.

5. His injury affected his day-to-day life (e.g., needed extra time to get to classes, could not play basketball and other recreational games, and was not able to participate in some of his classes because he is a Physical Education major) and described the entire injury experience as frustrating and continuously on his mind.

6. His surgery date created a significant amount of anxiety (e.g., he had no control when it was to take place because it was up to his parents) and worry (e.g., if his surgery ended up being postponed he felt he may not be ready for the next season).

7. His support system consisted of his friends and parents.

Phase 2: Final Themes

1. The head athletic trainer had concerns about the swelling in the athlete's knee and the type of supervision he was receiving at home.

2. Swelling in his knee was a big issue causing frustration and anger over the restrictions he had in rehabilitation and he felt his body was holding him back from moving forward with recovery.

3. He did not have much confidence in the physical therapists working with him because there was no personal connection, as he was skeptical of their true intentions.

4. He felt great to be doing some type of basketball activity as it gave him confidence that his shot was still there and was less frustrated with his restrictions because physically he was able to do more.

5. Although the toughest parts of his rehabilitation entailed being out of shape with his cardiovascular stamina and having a weak leg, his motivation to continue rehabilitation and make it a priority came from having little to do.

6. He felt nervous, anxious, and a sense of urgency to start playing basketball because he was concerned about how rusty and far behind he would be compared to his teammates.

7. Although, he felt his support system primarily consisted of himself, he did admit that his parents encouraged him, yet he still did not hear from teammates, and was frustrated and angry that his coaches did not call to check on how he was progressing.

8. Dealing with his injury had been a strain mentally and felt overcoming his mental perspective will be difficult.

9. The toughest parts of being injured entailed being in that in-between stage where he was ready to play but he could not, he mentally did not know when he would be able to do what he wanted, and emotionally dealing with feeling useless.

10. His mind-set was starting to move towards not playing basketball (possibly start coaching) as he started to question whether or not he should just quit.

11. Maintaining his motivation throughout the summer had been difficult as it fluctuated from week to week, found it quite difficult to ignore distractions from getting in the way of his rehabilitation, and felt frustrated to watch friends play basketball (i.e., because he was unable to).

Phase 3: Final Themes

1. His goals were to get healthy and back to playing, improve his agility, and get his legs stronger.

2. He felt great to be practicing with his teammates because it reminded him of why he plays basketball.

3. He was upset with the lack of personal attention he received from his physical therapist, was frustrated by the lack of communication and urgency by his surgeon, and continued to be very angry with his coaches' disregard for his injury, rehabilitation progress, and his role for the upcoming season.

4. Although his father and peers had encouraged him, his support system primarily consisted of himself, as he generally felt unsupported by others during his injury experience.

5. He was frustrated because he was not 100 %, he realized that he should have done more rehabilitation over the summer, and because he thought he would be working solely on his basketball skills instead of still focusing on rehabilitating his leg.

6. The toughest challenge at this phase was being "almost" done (but not quite), finding the motivation to continue with rehabilitation, feeling doubtful about future playing possibilities, and feeling jealous of healthy teammates.

7. Other then knowing first hand what it was like to go through a season-ending injury, he learned what he was made of on the inside, felt it was a challenge mentally and physically to go through this experience, and constantly questioned himself because there are no guarantees in life.

APPENDIX L

FINAL THEMES

PARTICIPANT 2

Subject 2

Phase 1: Final Themes

1. When she first started pre-surgery rehabilitation she was coming regularly but then faded away which the athletic trainer attributed to immaturity and a lack of motivation.

2. When the injury initially occurred the athlete was hopeful that it was just a bad knee twist yet she starting thinking about her opportunity to start, competing again during the season, and questioning why this had to happen.

3. Thoughts about her surgery created a significant amount of anger and frustration because she and her coach disagreed on when the surgery should have taken place, resulting in her isolating herself from her coach.

4. The week following her ACL diagnosis she experienced pain, depression, and strong negative emotions (e.g., frustration, loss, and much crying).

5. She felt her biggest source of support was from her friends and parents and although the support had diminished from her team, overall she felt good with the encouragement she received from teammates, coaches, and athletic trainers.

6. Her injury affected her day to day life (e.g., needed extra time to get to classes, showers were very difficult, and was unable to drive) and she started thinking about how this injury was going to affect her summer (e.g., working and being physically restricted from what she truly wanted to do).

7. She struggled most with her up and down emotions, especially when she thought about her lost opportunity for the season.

8. Her biggest concerns were her surgery and what her knee would feel like when she started playing again.

9. The head athletic trainers biggest concern was that the physical therapist working with her over the summer recognized that she was not the most motivated person and needed to be pushed through some of the discomfort and pain.

Phase 2: Final Themes

1. Although her motivation was high for the first six weeks of rehabilitation, once she began to level off (i.e., stopped making regular gains) she found it to be repetitive, frustrating, and difficult to stay motivated.

2. She was concerned and fearful of re-injury, not being able to play to her potential, and losing her starting spot on the team.

3. Although she was ninety-five percent confident in a complete return, participating at fifty percent of her normal capacity in practice provided significant frustration with her continued physical restrictions and lack of cardiovascular fitness while trying to build confidence in her knee.

4. After surgery, her primary support came from her parents and physical therapists but once back at school her support shifted to her teammates and coach.

5. She felt her injury and rehabilitation experiences were extremely long but was happy with her progression, realized her situation could be worse, and felt she would never take softball and being healthy for granted again.

6. Not only did watching her teammates play in games continue to be extremely difficult for her (as she felt like she had been injured forever) but she also acknowledged

that being this close to playing (but still not capable of) might be her most frustrating time.

Phase 3: Final Themes

1. She was working the hardest at increasing her muscle strength in her legs, improving her quickness through agility exercises, was at one of the most motivated stages because she was seeing results, and felt good with the decisions she made throughout her rehabilitation.

2. While extremely eager to return to softball, she struggled with being patient and working through the anticipation and extreme emotion surrounding her fist game.

3. She was not worried about losing her position on the team, felt great to be around the other players, have the opportunity to give her input, and be included with the team goals.

4. She will never take playing softball or being healthy for granted again and felt this injury experience would make her work harder and concentrate more on conditioning and training her body properly.

5. Knowing first hand the experiences associated with a serious injury, her biggest fear was getting hurt again.

6. She felt her experiences with the sports medicine team (i.e., physical therapists, athletic trainers, doctors, and surgeon) were wonderful because they all took great care of her and explained every little detail regarding her injury, surgery, and rehabilitation.

APPENDIX M

FINAL THEMES

PARTICIPANT 3

Subject 3

Phase 1: Final Themes

1. While acknowledging being moody, depressed, and angry much more often then usual, he felt the most difficult aspects of being injured were coping with his physical restrictions, not being able to do what he wanted, losing his independence both in and outside of sport, mentally overcoming his injury, watching his team play, and hearing teammates complain about practice.

2. Although ready for the challenge, confident, and motivated, he realized that rehabilitation will be painful, demanding, and difficult to regain his leg strength and trust his knee again.

3. Although comfortable and confident with his surgeon, he was very nervous about having surgery, unsure of the pain to come, and found it mentally tough knowing that his knee had very little pain, yet in 48 hours he would be unable to walk.

4. He felt a bit isolated from the team because he was not playing, but his coach made going to practice important by supporting him and including him in many areas of practice (i.e., warming up the goalies, giving advice, encouragement, and criticism to teammates and coaches).

5. His support system consisted of his parents, friends, girlfriend, teammates, and student athletic trainer he was working with.

6. His biggest concerns were that his knee will never be 100% and that he will always be second guessing the reliability of his knee.

7. The injury was much more restricting then he anticipated and he was surprised by the impact it had on his day-to-day life (e.g., not being able to throw a football with

friends, needing extra time walking to classes, being unable to drive, and the discomfort of sitting in class and sleeping at night).

8. To cope with his injury he partied (i.e., drank) more then usual, yet also lifted more weights (i.e., upper body) in order to obtain some type of physical release.

Phase 2: Final Themes

1. His body responded very favorably to the surgery, had little swelling, and was able to progress rapidly.

2. His mood was mostly positive while in the training room as he joked around with the student athletic trainers daily.

3. His short term goals were to increase his leg strength and improve his cardiovascular fitness in order to be 100% by the fall (his long term goal).

4. He began to incorporate lacrosse specific activities into his rehabilitation and although he did not have complete confidence in his knee, his motivation increased because he was out of the training room.

5. While very happy with the medical care he had received, his support system consisted of parents, friends, teammates, and student athletic trainers.

6. Overall, he was pleased with the progress he had made and the limited restrictions resulting from his injury, as he felt optimistic, upbeat, and much less focused on coping with his injury.

7. He felt the toughest parts of returning to play will be cutting, doing the same move that got him injured, mentally getting rid of his apprehension, and overcoming the fear of re-injury and never regaining his prior athletic level.

8. Being less challenged physically, his motivation decreased as he felt rehabilitation was repetitive, boring, and less of a priority.

9. While not wanting sympathy, he did want others to realize the difficulties, frustrations, and the overall impact of the injury on his life (e.g., financial, physical, and personal).

10. His coach continued to keep him involved with the team in a coaching role (e.g., asking for his opinion, discussing team dynamics, and helping with practice) which allowed him to feel as much apart of the team as before his injury.

Phase 3: Final Themes

1. Although the surgeon felt his knee looked great he still needed to increase his leg strength, cardiovascular fitness, and explosive quickness.

2. Practicing with his team in a diminished capacity for the last three weeks of the season allowed him to see where his game was, provided a tremendous amount of excitement, and increased his confidence in his knee.

3. His focus shifted from getting his knee better to preparing for the season, as he was very happy that his injury situation was over and he could again concentrate solely on lacrosse.

4. He felt his support system had been great and that everyone (i.e., his surgeon, physician, athletic trainers, parents, friends, teammates, and coach) were always willing to help him.

5. He was concerned that he had lost a step, would not play to his potential, and that he would again have to prove himself to his coach.

6. He learned that it takes a lot of hard work to overcome this injury, felt his recovery could not have turned out better, and will never take playing lacrosse for granted.

7. Now that his recovery was complete, he would advise others who are in a similar circumstance to stay positive, to not dwell on the injury, and to make the best of it.

8. The head athletic trainer had no concerns that the athlete will recover completely and felt he should be playing summer league lacrosse in a month.

APPENDIX N

SIMILAR THEMES

Phase 1

1. Although ready for the challenge, confident, and motivated, the athletes realized that rehabilitation would be painful, demanding, and difficult.

2. Injury affected the athlete's day-to-day lives (e.g., they needed extra time to get to classes, they were unable to participate in desired activities, and some could not even drive a car).

3. The athletes' support systems primarily consisted of friends and family.

4. Significant concerns were expressed as they began to process the magnitude of their injuries.

Phase 2

1. Dealing with and mentally overcoming their injuries (i.e., fear of re-injury, not being able to play to their full potentials, and trusting their knees) was very difficult.

2. All athletes began to incorporate sport specific skills into their rehabilitation and although they had some apprehension, they all experienced an increase in motivation.

Phase 3

1. Athletes concentrated on improving their leg strength, cardiovascular fitness, and explosive quickness.

2. Playing with their teammates created excitement and increased their confidence in using their knees.

3. Although their overall injury experience had been difficult, the athletes learned more about themselves and the importance of their sport.

APPENDIX O

DISSIMILAR THEMES

Phase 1

Subject 1

1. He was coping with his injury by participating in some form of physical activity, such as continuing to lift weights with his upper body and doing his pre-surgery rehabilitation three days a week.

2. He was extremely surprised, frustrated, angered, and felt isolated by his coaches' and athletic trainer's lack of contact, support, communication, and guidance.

3. His surgery date created a significant amount of anxiety (e.g., he had no control when it was to take place because it was up to his parents) and worry (e.g., if his surgery ended up being postponed he felt he may not be ready for the next season).

Subject 2

1. When the injury initially occurred she was hopeful that it was just a bad knee twist yet she starting thinking about her opportunity to start, competing again during the season, and questioning why this had to happen.

2. Thoughts about her surgery created a significant amount of anger and frustration because she and her coach disagreed on when the surgery should have taken place, resulting in her isolating herself from her coach.

2. The week following her ACL diagnosis she experienced pain, depression, and strong negative emotions (e.g., frustration, loss, and much crying).

3. She struggled most with her up and down emotions, especially when she thought about her lost opportunity for the season.

Subject 3

1. While acknowledging being moody, depressed, and angry much more often then usual, he felt the most difficult aspects of being injured were coping with his physical restrictions, not being able to do what he wanted, losing his independence both in and outside of sport, mentally overcoming his injury, watching his team play, and hearing teammates complain about practice.

2. Although comfortable and confident with his surgeon, he was very nervous about having surgery, unsure of the pain to come, and he found it mentally tough knowing that his knee had very little pain, yet in 48 hours he would be unable to walk.

3. He felt a bit isolated from the team because he was not playing, but his coach made going to practice important by supporting him and including him in many areas of practice (i.e., warming up the goalies, and giving advice, encouragement, and criticism to teammates and coaches).

4. To cope with his injury he partied (i.e., drank) more than usual, yet also lifted more weights (i.e., upper body) in order to obtain some type of physical release.

Phase 2

Subject 1

1. He did not have much confidence in the physical therapists working with him because there was no personal connection, as he was skeptical of their true intentions.

2. Although the toughest parts of his rehabilitation entailed being out of shape with his cardiovascular stamina and having a weak leg, his motivation to continue rehabilitation and make it a priority came from having little to do.

3. He felt nervous, anxious, and a sense of urgency to start playing basketball because he was concerned about how rusty and far behind he would be compared to his teammates.

4. Although he felt his support system primarily consisted of himself he did admit that his parents encouraged him, yet he still did not hear from teammates, and was frustrated and angry that his coaches did not call to check on how he was progressing.

5. The toughest parts about being injured entailed being in that in-between stage where he was ready to play but he could not, not knowing when he would be able to do what he wanted, and emotionally dealing with feeling useless.

6. His mind-set was starting to move towards not playing basketball (possibly a start in coaching) as he started to question whether or not he should just quit.

Subject 2

1. Although her motivation was high for the first six weeks of rehabilitation, once she began to level off (i.e., stopped making regular gains) she found it to be repetitive, frustrating, and difficult to stay motivated.

2. After surgery, her primary support came from her parents and physical therapists, but once back at school, her support shifted to her teammates and coach.

3. She felt her injury and rehabilitation experiences were extremely long but was happy with her progression, realized her situation could be worse, and felt she would never take softball and being healthy for granted again.

4. Not only did watching her teammates play in games continue to be extremely difficult for her (as she felt like she had been injured forever) but she also acknowledged that being this close to playing (but still not capable of it) as her most frustrating time.

Subject 3

1. His short term goals were to increase his leg strength and improve his cardiovascular fitness in order to be 100% by the fall (his long term goal).

2. While very happy with the medical care he had received, his support system consisted of parents, friends, teammates, and student athletic trainers.

3. Overall, he was pleased with the progress he had made and the limited restrictions resulting from his injury, as he felt optimistic, upbeat, and much less focused on coping with his injury.

4. Being less challenged physically, his motivation decreased as he felt rehabilitation was repetitive, boring, and less of a priority.

5. While not wanting sympathy, he did want others to realize the difficulties, frustrations, and the overall impact of the injury on his life (e.g., financial, physical, and personal).

6. His coach continued to keep him involved with the team in a coaching role (e.g., asking for his opinion, discussing team dynamics, and helping with practice) which allowed him to feel as much a part of the team as before his injury.

Phase 3

Subject 1

1. He was upset with the lack of personal attention he received from his physical therapist, was frustrated by the lack of communication and urgency by his surgeon, and continued to be very angry with his coaches' disregard for his injury, rehabilitation progress, and his role for the upcoming season.

2. Although his father and peers had encouraged him, his support system primarily consisted of himself, as he generally felt unsupported by others during his injury experience.

3. He was frustrated because he was not 100%, realizing that he should have done more rehabilitation over the summer, and because he thought he would be working solely on his basketball skills instead of still focusing on rehabilitating his leg.

4. The toughest challenge at this phase was being "almost" done (but not quite), finding the motivation to continue with rehabilitation, feeling doubtful about future playing possibilities, and feeling jealous of healthy teammates.

Subject 2

1. While extremely eager to return to softball, she struggled with being patient and working through the anticipation and extreme emotions surrounding her fist game.

2. Knowing first hand the experiences associated with a serious injury, her biggest fear was getting hurt again.

3. She felt her experiences with the sports medicine team (i.e., physical therapists, athletic trainers, doctors, and surgeon) were wonderful because they all took great care of her and explained every little detail regarding her injury, surgery, and rehabilitation.

Subject 3

1. His focus shifted from getting his knee better to preparing for the season, as he was very happy that his injury situation was over and he could again concentrate solely on lacrosse.

2. He felt his support system had been great and that everyone (i.e., his surgeon, physician, athletic trainers, parents, friends, teammates, and coach) were always willing to help him.

3. He was concerned that he had lost a step, would not play to his potential, and that he would again have to prove himself to his coach.

4. Now that his recovery was complete, he would advise others who are in a similar circumstance to stay positive, to not dwell on the injury, and to make the best of it.

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